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LABOR REVIEW**



SPECIAL FEATURES IN THIS ISSUE

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History of wages in the United States from colonial times to 1928. Bulletin No. 499.

Proceedings of sixteenth annual meeting of the International Association of Public Employment Services. Bulletin No. 501.

Wages and hours of labor in the motor-vehicle industry, 1928. Bulletin No. 502.

Wages and hours of labor in the men's clothing industry, 1911 to 1928. Bulletin No. 503.

Wages and hours of labor in the hosiery and underwear industries, 1907 to 1928. Bulletin No. 504.

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Handbook of American trade-unions: 1929 edition. Bulletin No. 506.

Textile Safety Code. Bulletin No. 509.

IN PRESS

Workmen's compensation legislation of the United States and Canada as of January 1, 1929. Bulletin No. 496.

Building permits in the principal cities of the United States in 1928. Bulletin No. 500.

Association of Governmental Officials in Industry of the United States and Canada. Sixteenth annual convention. Bulletin No. 508.

UNITED STATES DEPARTMENT OF LABOR

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BUREAU OF LABOR STATISTICS

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This Issue in Brief

Recent data on trade-union membership and organization show a loss in the aggregate membership of all trade-unions of 112,272 in 1929 as compared with 1926. Unions in the American Federation of Labor, on the other hand, report an increase of 126,430 over 1926. Ten national organizations have passed out of existence since 1926. Most of these were small dual organizations, which have been absorbed by larger bodies. During the same period three new dual organizations have developed in different fields. The greatest increases in membership are reported in the construction industry and in public service. Page 1.

In April, 1929, 7.8 per cent of 58,866 wage earners, selected as a representative cross section of Philadelphia's population, were found to be idle because of inability to obtain work. The survey was made by attendance officers of the compulsory education bureau of that city in cooperation with the Wharton School of Finance and Commerce. An additional 2.6 per cent of these wage earners were idle on account of sickness or from other causes. The percentage unemployed varied greatly for different districts and for different occupational groups. Page 17.

A similar survey of unemployment in Buffalo, N. Y., in November, 1929, found 5.4 per cent of the normally employed wage earners to be idle because of inability to find work. This study covered 15,164 persons and was made under the auspices of the New York Department of Labor. Page 25.

In 1929 the average earnings per hour in foundries were 62.4 cents and in machine shops 63.8 cents, according to the survey of wages and hours in foundries and machine shops in 1929 made by the Bureau of Labor Statistics. Average full-time hours per week were 51 in foundries and 50.3 in machine shops. Compared with 1927, the date of the latest previous survey, average earnings per hour show no increase in foundries but an increase of 1.3 cents in machine shops, while average full-time weekly hours decreased slightly in foundries and increased slightly in machine shops. Page 146.

A reduction in industrial accidents of 21.5 per cent between 1926 and 1928 is shown by reports from over 700 selected member establishments of the National Safety Council. There was a correspondingly favorable showing in the frequency and severity rates, the former declining from 27.61 in 1926 to 21 in 1928—a reduction of 23.9 per cent—and the latter, from 2.1 in 1926 to 1.71 in 1928, or 18.6 per cent. Page 90.

Pulmonary asbestosis resulting from exposure to asbestos dust is a hazard in all processes in which asbestos is handled, from extraction onward. The dust causes a pulmonary fibrosis, attacking the bases of the lungs, which, like silicosis, is frequently complicated by tuberculosis. In this form of pneumoconiosis the most distressing symptom is the difficult or labored breathing, the chest expansion often being reduced to 1 inch or even less. Page 82.

Farmers were found to be better off than the laborers, artisans, and broken families of the urban population, although not so well off as the three upper city classes—managerial, professional, and business—in two areas in Minnesota selected for study by an investigator of the University of Minnesota. It is to be noted, however, that these two areas were more prosperous than the average of the State. Page 266.

The growth of the movement to provide for life insurance and old-age pensions by collective agreement is shown by recent agreements of electrical workers and street-railway employees. Electrical workers' agreements in two cities provide for life insurance of \$3,000 per man, \$30 per month for total disability, and \$40 per month pension after the age of 65 years, to be paid for by the industry. Street-railway employees in one city are provided with life insurance of \$1,000, and those employees who have been in the employment of the company for 20 years or more, and who have arrived at the age of 65 years, receive a monthly pension of \$58. Page 10.

A study of the 5-day week in manufacturing industries made by the National Industrial Conference Board shows 270 establishments operating on a year-round 5-day week schedule at the end of the year 1928. Data on the weekly output under the 5-day schedule as compared with the former 5½ and 6 day schedules were obtained from 127 establishments. Of 94 companies that had reduced the total hours per week, almost 70 per cent reported no loss in total output, while 18 of the companies reported an increase. Page 158.

Cooperative credit societies (i. e., credit unions) are being established at the rate of 20 to 40 per month. These are societies whereby persons in moderate circumstances pool their resources and lend from them at low rates to their members. During 1928 the credit unions of New York and New Jersey alone made loans of more than \$19,000,000, while those of seven other States had loans outstanding at the end of the year amounting to more than \$14,000,000. In the six States for which membership data were available, credit unions had 193,536 members of whom 96,826 were borrowers. Page 13.

Believing that the only real remedy for unemployment is to furnish other work, an English firm has started new industries to absorb the workers rendered superfluous by better organization and increased mechanical efficiency. Previous to the inauguration of this scheme, the firm had provided additional benefits to those given under the State unemployment insurance scheme, developed a plan for securing openings in other industries for workers dismissed when a reduction of force became necessary, and tried the experiment of helping the workers to set up in business for themselves. Page 40.

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Trade-Union Organization and Membership in 1929

A COMPARISON of the 1929 edition of the Handbook of American Trade-Unions (Bul. No. 506), just issued by the Bureau of Labor Statistics, with the edition published in 1926 (Bul. No. 420), develops a number of changes in trade-union organization and membership. Some of the structural changes are significant, but on the whole membership figures show no marked differences over the 3-year period.

Aggregate membership of all trade-unions, both within and without the American Federation of Labor, shows a decrease of 112,272 in 1929, the figures being 4,443,523 in 1926 and 4,331,251 in 1929.¹ The unions in the American Federation of Labor, on the other hand, show an increased membership in 1929 of 126,430, as compared with 1926. This is, however, largely because one of the largest labor organizations, the Brotherhood of Railway and Steamship Clerks, which in 1926 was expelled from the federation, had resumed its affiliation by 1929 and is of course listed in the new handbook as an American Federation of Labor union.

According to the bureau's latest survey, 146 organizations having national entity and significance were functioning in June, 1929. Of these, 106 are in affiliation with the American Federation of Labor. Comparative figures in the earlier survey give 156 organizations, 107 of them affiliated. The new handbook also lists, without detailed information, three independent "dual" organizations which have come into being within the past year and which did not report their membership.

The membership figures used here and in the bulletin are those reported to the bureau by the organizations themselves in all cases except where the union has a fixed policy of not divulging its membership. In those cases the bureau has used the voting strength of the union in the American Federation of Labor, which represents the figure recognized by that body as the approximate number in the union.

Building Trades

Two unions formerly operating in the construction industry have disappeared through absorption by larger organizations. One of these, the International Brotherhood of Steam Shovel and Dredge Men, was a dual organization which had functioned independently

¹ These figures differ somewhat from the sum of the reported membership of the various unions, for the reason that in some cases membership was reported in confidence, and while the figures thus given are not published they are included in the grand total, which includes also the membership of directly affiliated American Federation of Labor unions.

for many years following its expulsion from the American Federation of Labor for refusal to amalgamate with the steam engineers. The steam-shovel men's union was the only independent one in the building industry. In 1927 it reversed its policy of independent action and merged with the engineers. At the same time the name of the latter organization was changed from International Union of Steam and Operating Engineers to International Union of Operating Engineers.

The other building-trades union which has passed out of existence is the Tunnel and Subway Constructors' International Union. It surrendered its charter as a national entity in 1929, and became a local of the International Hod Carriers, Building and Common Laborers' Union.

The organizations in the building industry and their membership in 1926 and 1929 are listed below. Membership growth is especially marked in the hod carriers' organization, for which an increase of 30,000 is reported. Only a small part of this increase can be credited to the absorption of the tunnel workers, who numbered only 4,000 in 1926. The plasterers have added 11,000 and the bricklayers over 20,000 to their membership since 1926. The only union reporting loss of members is the lathers, but several organizations give the same membership figure for both years.

Organization	1926	1929
Asbestos Workers, International Association of Heat and Frost Insulators and	2, 400	3, 000
Bricklayers, Masons and Plasterers' International Union of America	103, 600	125, 000
Bridge, Structural and Ornamental Iron Workers, International Association of	18, 350	21, 000
Carpenters and Joiners of America, United Brotherhood of	376, 400	376, 400
Electrical Workers, International Brotherhood of	140, 000	141, 640
Elevator Constructors, International Union of	18, 000	18, 000
Engineers, International Union of Operating	33, 000	36, 000
Granite Cutters' International Association of America	8, 500	8, 500
Hod Carriers, Building and Common Laborers' Union of America, International	65, 000	95, 000
Lathers' International Union, Wood, Wire and Metal	17, 000	16, 500
Marble, Stone and Slate Polishers, Rubbers and Sawyers, Tile and Marble Setters' Helpers and Terrazzo Workers' Helpers, International Association of	4, 500	6, 500
Painters, Decorators and Paperhangers of America, Brotherhood of	125, 000	125, 000
Plasterers and Cement Finishers' International Association Operative	32, 000	43, 000
Plumbers and Steamfitters, United Association of Journeymen	60, 000	65, 000
Roofers, Damp and Waterproof Workers Association, United Slate, Tile and Composition	3, 500	4, 500
Steam Shovel and Dredge Men, International Brotherhood of	11, 500	
Stone Cutters' Association, Journeymen	5, 075	5, 800
Tunnel and Subway Constructors' International Union	4, 000	(¹)
Total	1, 027, 825	1, 090, 840

¹ Now a local of the International Hod Carriers' Union.

Metals and Machinery

ORGANIZATIONS listed under metals and machinery show slight change either in structure or in membership. One small secessionist group, the Amalgamated Metal Workers, has collapsed nationally, and its membership has probably returned to the International Association of Machinists, from which it seceded. The independent United Automobile, Aircraft and Vehicle Workers has suffered a material loss of membership through the withdrawal of two of its locals in New York, which have joined the American Federation of Labor as directly affiliated local unions.

This group of organizations, with their respective memberships in 1926 and 1929, is:

Organization	1926	1929
Automobile, Aircraft and Vehicle Workers of America, United	3, 000	1, 500
Blacksmiths, Drop Forgers and Helpers, International Brotherhood of	15, 000	15, 000
Boilermakers, Iron Shipbuilders and Helpers of America, International Brotherhood of	23, 000	20, 000
Draftsmen's Unions, International Federation of Technical Engineers, Architects and	500	1, 800
Engravers' Union, International Metal	140	140
Firemen and Oilers, International Brotherhood of	17, 000	17, 000
Foundry Employees, International Brotherhood of	3, 500	3, 500
Iron, Steel and Tin Workers of North America, Amalgamated Association of	12, 500	11, 500
Machinists, International Association of	130, 000	137, 000
Metal Workers' International Association, Sheet	25, 000	25, 000
Molders' Union of North America, International	30, 000	30, 000
Pattern Makers' League of America	8, 985	8, 995
Polishers' International Union, Metal	9, 000	9, 500
Stove Mounters' International Union of North America	11, 600	11, 600
Total	279, 225	282, 535

¹ Voting strength in American Federation of Labor; membership not reported.

Transportation

A NUMBER of changes have taken place in the organizations covering transportation workers. These changes have involved the elimination of several dual organizations. Bulletin No. 420 lists 33 organizations in this group, while in Bulletin No. 506 the number is reduced to 28.

Two of the five were secessionist groups of express workers which had organized independently into the Order of Railway Expressmen and the American Federation of Express Workers. Both have now returned to the parent body, the Brotherhood of Railway and Steamship Clerks, Freight Handlers, Express and Station Employees, which, in turn, has reaffiliated to the American Federation of Labor.

Two other organizations have disbanded since 1926, but nothing definite was learned as to what has become of the members. The organizations in question are the International Association of Railroad Supervisors of Mechanics and the American Brotherhood of

Railway Track Foremen and Allied Brotherhood of Railway Track Laborers. The increase of 10,000 in the membership of the American Federation of Railroad Workers suggests that it may have absorbed some of the membership of the disbanded organizations.

The Brotherhood of Sleeping Car Porters has, temporarily at least, given up the effort to continue as a national organization. Its various locals have been chartered under the direct jurisdiction of the American Federation of Labor.

The railroad organizations on the whole report loss of membership. The trainmen are the only group among the railroad brotherhoods showing an increase. In ocean transportation, on the other hand, some advance has been made. The figures are as follows:

Organization	1926	1929
Agents, American Railway	200	200
Carmen of America, Brotherhood of Railway	56, 000	56, 000
Clerks, Freight Handlers, Express and Station Employees, Brotherhood of Railway and Steamship	135, 000	135, 000
Conductors, Brotherhood of Dining Car	700	1, 000
Conductors, Order of Sleeping Car	2, 300	2, 300
Conductors of America, Order of Railway	60, 000	53, 055
Engineers, Grand International Brotherhood of Locomotive	88, 200	83, 000
Expressmen, Order of Railway	18, 000	(¹)
Express Workers, American Federation of	15, 000	(¹)
Firemen and Enginemen, Brotherhood of Locomotive	106, 800	104, 602
Maintenance of Way Employees, Brotherhood of	² 37, 400	² 35, 000
Porters, Brakemen and Switchmen, Association of Train	1, 100	1, 700
Porters, Brotherhood of Sleeping Car	(³)	(⁴)
Railroad Supervisors of Mechanics, International Association of	16, 400	(⁵)
Railroad Workers, American Federation of	15, 000	25, 000
Signalmen of America, Brotherhood of Railroad	8, 000	10, 000
Station Employees, Brotherhood of Railroad	(³)	(³)
Street and Electric Railway Employees, Amalgamated Association of	100, 000	100, 000
Switchmen's Union of North America	9, 000	9, 600
Teamsters, Chauffeurs, Stablemen and Helpers, International Brotherhood of	100, 000	100, 000
Telegraphers, Order of Railroad	75, 400	65, 000
Track Foremen and Allied Brotherhood of Railway Track Laborers, American Brotherhood of Railway	27, 000	(⁵)
Train Dispatchers' Association, American	4, 357	4, 357
Trainmen, Brotherhood of Railroad	180, 000	183, 906
Trainmen, Association of Colored Railway	4, 800	3, 000
Yardmasters of America, Railroad	4, 000	4, 000
Yardmasters of North America, Railroad	(³)	(³)
Engineers' Beneficial Association, National Marine	10, 000	10, 000
Engineers, Ocean Association of Marine	1, 500	1, 500
Longshoremen's Association, International	35, 000	40, 000
Masters, Mates and Pilots, National Organization	9, 457	10, 000
Neptune Association	2, 500	3, 000
Seamen's Union of America, International	18, 000	18, 000
Total	1, 141, 114	1, 059, 220

¹ Now merged in Brotherhood of Railway and Steamship Clerks.

² Voting strength in the American Federation of Labor. Membership not reported.

³ Membership not reported.

⁴ No longer a national organization.

⁵ Disbanded.

Mining, Oil, and Lumber

FOR the first time in its history the United Mine Workers has experienced a secession movement which has gone so far as to establish a rival organization. The National Miners' Union was launched in September, 1928. It failed to report to the bureau on its membership or the extent of organization, hence it is only listed in the handbook, and no detailed statement is given.

In other respects the organizations in this classification are substantially as they were three years ago:

Organization	1926	1929
Loggers and Lumbermen, Loyal Legion of	10, 000	10, 000
Mine, Mill and Smelter Workers, International Union of	20, 000	20, 000
Mine Workers of America, United	500, 000	450, 000
Oil Field, Gas Well and Refinery Workers, International Association of	¹ 1, 200	¹ 1, 000
Total	531, 200	481, 000

¹ Voting strength in the American Federation of Labor; membership not reported.

Paper, Printing, and Bookbinding

THERE has been no change in the make-up of the unions having jurisdiction in paper making, printing, and bookbinding, and very little in their memberships. In paper manufacture two of the three unions have lost members, while the third shows no change. The printing unions report either stability or slight increases.

Organization	1926	1929
Paper Makers, International Brotherhood of	7, 000	6, 000
Pulp, Sulphite, and Paper Mill Workers, International Brotherhood of	10, 000	10, 000
Wall Paper Crafts, United	800	660
Bookbinders, International Brotherhood of	14, 000	14, 000
Engravers' Union, International Photo	7, 402	8, 600
Lithographers of America, Amalgamated	5, 400	5, 906
Pressmen and Assistants' Union, International Printing	45, 000	45, 000
Printers, Die Stampers, and Engravers' Union, International Plate	1, 000	1, 000
Siderographers, International Association of	80	80
Stereotypers and Electrotypers' Union, International	7, 000	7, 600
Typographical Union, International	75, 000	77, 000
Total	172, 682	175, 846

Clothing

THE only change in the organization of the clothing industry is the rise of a dual organization in the women's ready-to-wear clothing trade. The Needle Trades Workers' Industrial Union, as its name suggests, was designed to include the entire clothing industry in its jurisdiction. It is a "left wing" organization founded in January,

1929, by secessionist groups from the International Ladies' Garment Workers' Union and the International Fur Workers' Union. The organization made no report to the bureau concerning its structure, activities, or membership.

Changes in membership of the clothing-trades unions are:

Organization	1926	1929
Boot and Shoe Workers Union.....	¹ 36, 200	¹ 32, 600
Clothing Workers of America, Amalgamated.....	150, 000	125, 000
Fur Workers' Union, International.....	12, 000	12, 000
Garment Workers' Union, International Ladies'.....	87, 000	87, 000
Garment Workers of America, United.....	80, 000	85, 000
Glove Workers' Union, International.....	¹ 300	¹ 700
Hat, Cap, and Millinery Workers' International Union, Cloth.....	11, 000	11, 000
Hatters of North America, United.....	11, 500	11, 500
Shoe Workers' Protective Union.....	16, 000	16, 000
Tailors' Union of America, Journeyman.....	9, 200	7, 086
Total.....	413, 200	387, 886

¹ Voting strength in the American Federation of Labor; membership not reported.

Textile Industry

STILL another organization has been added to those claiming jurisdiction over the textile industry, with the expansion of the former "United Front" into the National Textile Workers' Union; likewise a craft group of silk workers has developed from local into national significance. At the same time all of the textile unions operating in 1926 are functioning, so that there are now three industrial and three craft organizations in the textile field. The new group, of "left wing" inception, did not report its membership, but it is considered to be drawing, temporarily at least, upon the disaffected elements of all the others.

The American Federation of Textile Operatives has been for several years a rival organization of the United Textile Workers, the American Federation of Labor union in the textile industry. The American Federation of Textile Operatives had virtually exclusive jurisdiction over the loom-fixing craft through the National Loom Fixers' Association, a component unit. In 1928, however, the National Loom Fixers' Association lost about 50 per cent of its membership when the loom fixers of New Bedford, Mass., withdrew and joined the United Textile Workers. That loss, and the encroachments of the new National Textile Workers' Union, started a movement within the American Federation of Textile Operatives looking toward amalgamation with the United Textile Workers. That movement was decisively defeated at the 1929 convention, and the American Federation of Textile Operatives continues as an independent organization.

Organizations in the textile industry and their memberships, omitting the National Textile Workers, are:

Organization	1926	1929
Lace Operatives of America, Amalgamated.....	1, 600	1, 300
Mule Spinners, International.....	8, 000	8, 000
Silk Workers, Associated.....		10, 000
Textile Operatives, American Federation of.....	11, 000	6, 000
Textile Workers of America, United.....	¹ 30, 000	¹ 30, 000
Total.....	50, 600	55, 300

¹ Voting strength in the American Federation of Labor; membership not reported.

Glass, Clay, and Stone

IN ONLY one other industrial grouping has there been any material organic change in trade-union makeup. The development of machinery in glass manufacture has brought about the dissolution of the National Window Glass Workers, an organization composed entirely of hand workers. Its place in the industry under machine manufacture is now taken by three separate organizations, two of which are affiliated to the American Federation of Labor.

Other unions in this classification have experienced no changes, and show practically the same membership in both 1926 and 1929, the only difference of any consequence being in the National Brotherhood of Operative Potters, which reports a considerable loss of membership.

Organization	1926	1929
Brick and Clay Workers of America, United.....	¹ 5, 000	¹ 5, 000
Glass Bottle Blowers' Association.....	6, 000	6, 000
Glass Cutters and Flatteners' Association, Window.....	(²)	300
Glass Cutters and Flatteners' Protective Association, Window.....	600	600
Glass Cutters' League of America, Window.....	500	900
Glass Workers, National Window.....	2, 000	
Glass Workers' Union, American Flint.....	6, 900	6, 900
Paving Cutters' Union, International.....	2, 400	2, 400
Potters, National Brotherhood of Operative.....	7, 900	6, 500
Quarry Workers' International Union.....	4, 000	4, 000
Total.....	35, 300	32, 600

¹ Voting strength in the American Federation of Labor; membership not reported.

² Membership not reported.

Food, Liquor, and Tobacco

THE Amalgamated Tobacco Workers, an independent industrial organization, has disappeared since Bulletin No. 420 was issued. Otherwise the unions in this group, except the cigar makers, show little difference:

Organization	1926	1929
Bakery and Confectionery Workers' International Union.....	24, 600	27, 030
Brewery, Flour, Cereal, and Soft Drink Workers, International Union of United.....	17, 000	16, 000
Food Workers of America, Amalgamated.....	12, 000	12, 000
Hotel and Restaurant Employees' International Alliance and Bartenders' International League.....	38, 240	37, 969
Meat Cutters and Butchers Workmen, Amalgamated.....	¹ 12, 200	¹ 11, 800
Cigar Makers' International Union.....	24, 000	15, 000
Tobacco Workers' International Union.....	2, 000	3, 000
Total.....	131, 040	122, 799

¹ Voting strength in the American Federation of Labor; membership not reported.

Other Groups

IN THE following group divisions the structure and relations of the various organizations remain the same, the only difference being in the number of members. It is interesting to note the substantial increase in the number of organized workers in public employ.

WOODWORKING

Organization	1926	1929
Carvers' Association, International Wood.....	1, 100	1, 100
Coopers' International Union.....	1, 215	750
Piano, Organ and Musical Instrument Workers, International Union of.....	600	600
Upholsterers, Carpet and Linoleum Mechanics' International Union.....	12, 000	12, 000
Total.....	14, 915	14, 450

PUBLIC SERVICE

Federal Employees, National Federation of.....	37, 000	47, 000
Fire Fighters, International Association of.....	20, 000	20, 000
Pavers, Rammermen, Flaggers, Bridge and Stone Curb Setters, International Union of.....	12, 000	12, 000
Policewomen, International Association of.....	300	600
Teachers, American Federation of.....	3, 500	5, 000
Postmasters of the United States, National Association of.....	1, 763	2, 404
Postmasters of the United States, National League of District.....	14, 000	17, 000
Postmasters' Association of the United States, Service.....	415	960
Mail Service, National Council of Officials of the Railway.....	330	330
Mail Association, Railway.....	20, 000	20, 000
Postal Supervisors, National Association of.....	5, 500	5, 500
Post Office Clerks, National Federation of.....	40, 000	40, 000
Post Office Clerks, United National Association of.....	40, 000	45, 000
Letter Carriers, National Association of.....	50, 000	56, 483
Rural Letters Carriers' Association, National.....	28, 600	34, 493
Rural Letter Carriers, National Federation of.....	1300	1800
Postal Employees, National Alliance of.....	1, 700	3, 300
Post Office Laborers, National Association of.....	1, 023	2, 117
Total.....	266, 431	302, 987

AMUSEMENTS

Actors and Artistes of America, Associated.....	14, 000	14, 000
Musicians, American Federation of.....	125, 000	125, 000
Stage Employees and Moving Picture Machine Operators, International Alliance of Theatrical.....	22, 000	23, 000
Total.....	161, 000	162, 000

¹ Voting strength in the American Federation of Labor; membership not reported.

MISCELLANEOUS TRADES

Organization	1926	1929
Barbers' International Union, Journeyman.....	50, 282	51, 840
Bill Posters and Billers, International Alliance of.....	6, 000	6, 000
Building Service Employees' International Union.....	6, 200	8, 000
Clerks' International Protective Association, Retail.....	¹ 10, 000	¹ 10, 000
Horseshoers, International Union of Journeymen.....	2, 000	1, 000
Laundry Workers' International Union.....	6, 500	6, 000
Pharmacists, American Registered.....	2, 500	2, 500
Telegraphers' Union, Commercial.....	5, 000	5, 000
Telephone Workers, International Brotherhood of.....	(²)	5, 400
Industrial Workers of the World.....	30, 000	30, 000
Total.....	118, 482	125, 740

¹ Voting strength in the American Federation of Labor; membership not reported.² Membership not reported.

Miscellaneous Manufactures

THE unions listed under this grouping differ somewhat in the two handbooks. The Sawsmiths' Union, listed in Bulletin No. 420, is no longer in existence nationally and survives only as a small local organization in Indianapolis, Ind. Leather manufacture was given a separate classification in the earlier work, and three unions were listed in that jurisdiction. Since then, however, two of these have amalgamated. In Bulletin No. 506 leather is included in miscellaneous manufacture.

The amalgamation referred to brought together into one union the United Leather Workers' International Union and the International Pocketbook Workers' Union. The latter organization, numerically three times as strong as the United Leather Workers, retains its headquarters and officers and exercises complete autonomy within its own branch of leather manufacture.

The organizations listed under miscellaneous manufacture are:

Organization	1926	1929
Broom and Whisk Makers' Union, International.....	¹ 700	¹ 500
Diamond Workers' Protective Union.....	375	325
Jewelry Workers' Union, International.....	¹ 800	¹ 900
Leather Workers' International Union, United.....	2, 000	8, 000
Pocketbook Workers' Union.....	6, 000	-----
Leather Workers' International Union of America, United.....	2, 000	1, 400
Powder and High Explosive Workers, United.....	200	157
Wire Weavers' Protective Association, American.....	380	380
Total.....	12, 455	11, 662

¹ Voting strength in the American Federation of Labor; membership not reported.

Canadian Membership

THE Canadian membership of international unions affiliated to the American Federation of Labor has increased from 134,454 in 1926

to 148,609 in 1929; independent American organizations with Canadian locals have lost members to the number of 24,819.

Eliminating the present Canadian membership in American unions (191,317) from the aggregate membership of all unions, there are 4,139,934 union members in the United States and its possessions, as reported to the Bureau of Labor Statistics. This is exclusive of the three new "left wing" organizations, for which the bureau has no membership data.

Life Insurance and old-age pensions established by collective agreement

LABOR organizations have long recognized the necessity of caring for their aged and incapacitated members, and many of them have provided life insurance, disability, and old-age benefits from the union funds. It is only within the last five years, however, that provisions of this character have been incorporated in collective agreements, the movement having been initiated in the street railway industry. The first agreement, so far as the bureau is aware, to provide for life insurance and sick benefits for the employees was made May 1, 1926, between the Newburgh (N. Y.) Public Service Corporation and the Amalgamated Association of Street and Electric Railway Employees; the life insurance policy of \$1,000 became effective after three months' service; the sick benefit policy called for payment of \$15 weekly. The agreements of the Chicago Rapid Transit Co. and the Chicago Surface Lines with their employees provide for \$1,000 life insurance and a sick benefit of \$20 per week. The street-railway employees of the Chicago & Joliet Electric Railway Co. and the Chicago & Joliet Transportation Co. are provided with a life insurance policy of \$1,000 and a sick benefit of \$20 per week. The Public Service Co., of San Antonio, Tex., carries a life insurance policy of \$1,000 for each one of its street-railway employees besides making a contribution to the union sick benefit department amounting to 35 cents per member per month.

The growth of the movement to provide these benefits for members of union organizations by collective agreements is shown by three agreements recently received by the bureau. Two agreements of electrical workers—that of Local Union No. 1 of St. Louis, Mo., with the Electrical Employers' Association, made July 15, 1929, and that of Local Union No. 3 of New York City, with the Electrical Contractors Association of New York, made November 1, 1929—provide for life insurance, disability benefits, and old-age pensions, to be paid for by the industry. The third agreement—that of the Des Moines Railway Co., with its employees, effective November 1, 1929, provides for life insurance and old-age pensions.

Electrical Workers

THE agreements of the electrical workers of New York City and of St. Louis, provide for a regular life insurance policy of \$3,000, with a pension of \$40 monthly for those of the age of 65 years or more, and of \$30 monthly for those totally disabled.

Since contractors depending upon building operations, the volume of which fluctuates with the seasons and business cycles, can not give

or offer to their employees continuous employment for the number of years usually designated by other industries as sufficient to warrant pensions, it was necessary to mobilize the employers in the industry into groups or associations in given cities and to carry the insurance through the group; thus no matter which of the employers a man works for or how often conditions may force him to change employers his insurance and pension continuity is assured.

Under the terms of the agreements a fund, to be administered by a board of trustees, will be raised through assessments upon all electrical contractors employing union workers. From this fund, premiums on the group insurance will be paid and the general organization of the project maintained.

The reasons advanced for the adoption of this plan for the protection of their members are given in the preamble of the New York agreement, which follows:

"It is almost universally admitted that industry can not and should not attempt to escape its responsibility and obligations to its aged and disabled workers and their dependents. Any industry that can not take care of its own can not justify its existence. The Electrical Contractors Association of New York has decided that the time is here when a comprehensive plan should be made effective to meet this obligation.

"The aged worn-out and disabled worker and his dependents are society's greatest tragedy. This conclusion is not prompted by mere sentiment nor based upon pure theory, but is attested by the manifest evidence of discarded, aged, and worn-out workers and their dependents which greets one on every highway and byway. In New York City alone there are 82 homes for the aged. There are over 6,000 people on the waiting list seeking admission to these 82 homes.

"Col. W. A. Starrett, of the firm of Starrett Bros., in his recent book, *Skyscrapers*, gives an impressive picture of the human wreckage left in the wake of the building industry. He says:

Old age, illness, and unemployment are, of course, the traditional terrors of the wage earner's life. The game is a killer. One passing a large metropolitan building during construction is apt to notice the young, virile men with non-chalant manner who so confidently go about their task. Few people stop to consider these same men after 25 to 30 years of this rigorous, exposed life. The admiring spectator sees young men, but little realizes the shadow that an uncertain future is casting.

The experienced builder, however, sees the premature aged building mechanic, sometimes a pathetic figure, standing on the sidewalk week after week, in the furtive hope that a job commensurate with his now narrowed abilities is available to him. Builders and the building industry generally are themselves the sufferers.

"A New York physician of wide experience, Congressman William I. Sirovich, has made a notable investigation of the problem. He states:

The lengthened period of life has simply created a longer period of old age. While life has been lengthened, it has not been matched by the proportionate increase of the working period. On the contrary, the workman to-day is unable to support himself by the work of his hands or brain for as long a period as either his father or his grandfather did. Older workers find it increasingly more difficult to find employment.

"One of our keenest financial and economic students, one of our most conservative Congressmen, Hamilton Fish, of New York, has also devoted considerable study to this problem. He states:

The United States in the last quarter of a century has become a great industrial Nation. It should cease playing the ostrich act and confront or at least attempt to solve the serious problem of old-age dependency. Our wage earners are thrown out on the industrial scrap heap at middle age, due to the high pressure and superefficiency methods of our industrial plans. The age line for employment is being steadily lowered. Our wage earners are left alone to worry and suffer humiliations of poverty in their declining years. We can not continue to shut our eyes indefinitely to the changed condition.

"Governor Franklin D. Roosevelt, whose studies of the problem are well known, states:

It is my feeling, and the feeling, I think, of the majority of our citizens, that the time has now come to banish the black shadow of old-age want. I do not believe it is necessary, nor do those who have studied the matter long and thoughtfully believe that it is an economic necessity that we must herd our aged workers dependent on their toil for their daily bread in institutions. It is not even an economic solution of the problem. It is the most wasteful and extravagant system that we could possibly devise. It belongs to that past barbaric age when we chained our insane to the walls of our madhouses.

"Thinking industrial leaders are rapidly reaching the conclusion that industry can well afford to provide for its own; that poorhouses and charity institutions are relics of the days of the past. Many of our largest industrial concerns have already provided protection and benefits to their thousands of employees and their dependents. The public has commended them highly for doing so. Ordinary decency justifies it, in fact, demands it.

"In recognition of this obligation, it is a notable fact that corporations are more and more providing life insurance, old age, and disability benefits for their employees. Over 200 public service corporations to-day carry such insurance benefits with one life insurance company alone. They have found it an economic advantage, a good investment.

"But what one large corporation can easily do in most fields of industrial enterprise, can not be done by the individual employer in our electrical construction industry. In our industry there is a large turnover of labor. The very nature of the industry requires men to move from job to job, from employer to employer. It is not infrequent that one electrical contractor may to-day employ many times more electrical workers than he will need to-morrow. He employs additional men as his jobs require them and discharges them as soon as possible. The electrical construction mechanics may be compared to a mobile army, moved from one field of operation to another.

"To meet this condition, a departure from the usual employer form of group insurance is necessary. The usual form provides that when a workman leaves his employer he leaves his insurance behind; that he can not transfer from one employer to another and that he must remain actively engaged with one concern.

"Because of the number of employers involved and the nature and practices of our industry, it is necessary that the employers act cooperatively and that a central organization be formed for the purpose of administering the work of collecting and disbursing premiums. The Electrical Contractors Association of New York has initiated this

move and has called upon the union to cooperate with the employers in dealing with this problem.

"The plan * * * has been adopted only after long and careful investigation and study of the problem. When considering the cost of this plan one must not confuse it with the stereotyped standard form of group insurance. The plan and the cost have been arrived at on a basis of permanency. It is not a year to year arrangement and the rate of the insurance carrier can not be altered or increased from time to time as is true with almost all other insurance group plans."

Street-Railway Employees

THE agreement entered into by the Des Moines Railway Co. and the Amalgamated Association of Street Railway Employees, Division 441, effective November 1, 1929, makes provision for old-age pensions and group life insurance.

The company agrees to create and administer a pension fund, paying into this fund the sum of \$1,500 monthly on the last day of each month during the term of this agreement. All employees who have been in the employ of the company continuously 20 years or more and who have arrived at the age of 65 years will be paid a pension of \$58 monthly during the term of this agreement. The company provides a group life insurance policy of \$1,000 payable to the estate or beneficiaries of any employee who dies during the term of this agreement.

Development of Credit Unions in Various States

PASSAGE of legislation in many States during the past few years, authorizing the formation of credit unions, has furnished impetus for the organization of many credit societies. New societies are reported at the rate of 20 to 40 per month.¹ These societies are of especial interest as they constitute a source of credit for wage earners and others of moderate means to whom bank credit is not usually open.

Practically all of the laws require that credit unions formed under the act shall make annual reports to some State official (usually the commissioner of banks) setting forth certain specified data. The annual reports of the commissioner of banks, especially of the States in which the law has been in operation for a number of years, contain much valuable information concerning this type of cooperative society. The data below were compiled from the published State reports or from information furnished direct to the Bureau of Labor Statistics by the State officials concerned.²

Table 1 shows, for the nine States of Iowa, Massachusetts, Minnesota, New Hampshire, New Jersey, New York, Rhode Island, Virginia, and Wisconsin, the number and status of the credit unions in each city (where data were available). This table covers 540 credit unions. In the six States for which membership data are available, there were

¹ In the *Bridge* (organ of the Credit Union National Extension Bureau), Boston.

² Iowa, Superintendent of Banking, Annual report, 1928-29; Massachusetts, Commissioner of Banks, Annual reports, 1914-1928; New Jersey, Commissioner of Banking and Insurance, Annual reports, 1925-1928; New York, Superintendent of Banks, Annual reports, 1915-1928; Rhode Island, Bank Commissioner, Annual report, 1928-29; Wisconsin, Banking Department, Annual report, 1928. Data for Minnesota, New Hampshire, and Virginia were furnished direct to the Bureau of Labor Statistics by State officials.

on December 31, 1928, 193,536 members, of whom 96,826 were borrowers. As is seen, both in point of societies and of membership, Massachusetts leads, with New York second. In both of these States, however, the credit union law has been in operation for a considerable period, that of Massachusetts having been passed in 1909 and that of New York in 1914.

Data as to loans made during 1928 are available only for New Jersey and New York, where \$19,192,294 was granted in loans. In the seven States of Iowa, Massachusetts, Minnesota, New Hampshire, Rhode Island, Virginia, and Wisconsin the credit unions had loans outstanding at the end of the year amounting to \$14,363,485.

TABLE 1.—STATUS OF CREDIT UNIONS IN SPECIFIED CITIES AND STATES AS OF DECEMBER 31, 1928

State and city	Number of societies	Number of members	Paid-in share capital	Guaranty fund	Number of borrowers	Loans outstanding at end of year	Dividend paid
Iowa ¹	31	(¹)	\$93,220	\$946	(¹)	\$70,585	(¹)
Massachusetts:							
Beverly	2	790	83,957	9,046	353	117,398	(²)
Boston	143	43,540	3,858,812	185,285	23,213	4,156,446	(²)
Brockton	6	3,744	316,277	24,404	1,775	404,954	(²)
Brookline	1	61	9,168	275	33	9,523	(²)
Cambridge	10	1,687	164,450	7,211	788	165,217	(²)
Chelsea	23	3,141	391,332	11,807	1,809	359,113	(²)
Chicopee	1	1,360	32,853	6,095	425	234,610	(²)
Dedham	1	50	6,366	115	40	4,946	(²)
Everett	2	367	30,371	1,206	220	31,078	(²)
Fall River	2	295	8,558	268	124	9,082	(²)
Fitchburg	5	2,218	242,057	43,932	707	597,520	(²)
Frammingham	1	1,342	76,595	5,492	725	49,608	(²)
Gloucester	1	74	10,758	388	33	11,298	(²)
Haverhill	1	105	6,469	251	53	6,064	(²)
Holyoke	2	1,150	572,457	21,133	253	394,576	(²)
Lawrence	4	1,354	154,717	7,485	713	170,977	(²)
Lexington	1	64	5,314	185	38	5,136	(²)
Lowell	8	4,745	229,905	29,748	1,568	843,165	(²)
Lynn	6	3,542	253,889	26,148	1,613	363,937	(²)
Malden	9	4,184	626,666	39,422	2,091	653,750	(²)
Mansfield	1	585	59,005	2,509	282	92,780	(²)
Marlborough	1	905	107,417	4,718	318	149,056	(²)
Medway	1	51	4,106	95	37	3,580	(²)
Milford	1	51	6,635	251	18	5,843	(²)
New Bedford	1	2,596	186,889	43,262	919	525,966	(²)
Norwood	1	407	6,464	201	57	5,438	(²)
Peabody	1	250	21,202	466	146	21,675	(²)
Pittsfield	4	214	34,106	1,184	143	33,022	(²)
Plymouth	1	192	1,321		15	1,216	(²)
Revere	5	1,130	308,950	23,918	774	335,402	(²)
Rockland	1	337	7,302	889	155	16,380	(²)
Salem	4	1,075	28,282	4,189	471	78,994	(²)
Somerville	1	52	4,148	171	23	3,623	(²)
Springfield	11	4,395	362,427	16,742	2,936	383,909	(²)
Taunton	2	69	3,906	132	18	3,760	(²)
Walpole	1	1,121	36,806	3,540	272	45,605	(²)
Waltham	2	93	7,328	169	51	6,714	(²)
Watertown	1	122	3,806	48	46	2,940	(²)
Webster	1	54	820	14	10	780	(²)
West Springfield	1	198	6,100	189	86	5,923	(²)
Winthrop	2	1,076	214,080	15,066	633	203,992	(²)
Worcester	18	9,016	1,302,540	116,982	3,322	1,270,074	(²)
Total	296	98,402	9,794,611	654,691	47,306	11,785,070	(²)
Minnesota	35	6,111	183,006	\$ 5,125	2,494	258,864	1,450
New Hampshire ⁴	3	(¹)	45,982	(¹)	(¹)	83,919	(¹)

¹ No data.

² Report gives rate but not amount of dividend.

³ Reserve fund.

⁴ As of June 30, 1929.

DEVELOPMENT OF CREDIT UNIONS

15

TABLE 1.—STATUS OF CREDIT UNIONS IN SPECIFIED CITIES AND STATES AS OF DECEMBER 31, 1928—Continued

State and city	Number of societies	Number of members	Paid-in share capital	Guaranty fund	Number of borrowers	Loans during year	Dividend paid
New Jersey:							
Atlantic City.....	1	(¹)	(¹)	(¹)	(¹)	\$11,230	\$26
Harrison.....	1	(¹)	(¹)	(¹)	199	31,870	943
Hoboken.....	1	(¹)	(¹)	(¹)			
Newark.....	1	(¹)	(¹)	(¹)	68	18,900	618
Red Bank.....	1	(¹)	(¹)	(¹)			
Trenton.....	2	(¹)	(¹)	(¹)	233	31,802	4,729
Union City.....	1	(¹)	(¹)	(¹)	20	5,680	103
Total.....	8	2,462	(¹)	(¹)	520	99,482	6,419
New York:							
Albany.....	2	208	\$5,952	\$617	70	7,969	488
Brooklyn.....	32	16,058	2,460,840	238,934	10,950	4,611,126	119,164
Buffalo.....	1	130	2,341	22	47	3,115	
Ellenville.....	1	311	68,115	4,564	140	156,283	4,220
Middle Village.....	1	536	65,499	5,385	355	131,746	2,886
Monticello.....	1	363	48,025	3,823	153	106,593	2,269
New Rochelle.....	1	351	129,496	6,107	213	164,705	5,277
New York (except Brooklyn).....	73	55,705	7,687,714	866,188	31,633	13,689,038	424,464
Rochester.....	1	866	27,006	610	430	88,980	403
Schenectady.....	1	72	833	18	14	800	
Spring Valley.....	1	147	13,840	1,713	86	27,450	554
Syracuse.....	1	61	695	4	13	1,986	
Troy.....	1	120	36,925	2,349	77	87,650	1,318
Woodridge.....	1	112	7,720	126	54	15,371	197
Total.....	118	75,040	10,555,001	1,130,460	44,235	19,092,812	561,240
						Loans outstanding at end of year	
Rhode Island:							
Central Falls.....	1	4,807	350,486	41,300	563	\$1,534,007	(¹)
Manville.....	1	367	4,710	93	52	8,801	(¹)
Newport.....	1	1,423	83,847	4,257	717	97,581	(¹)
Pawtucket.....	3	646	16,321	580	102	10,724	(¹)
Providence.....	5	1,907	76,427	2,781	837	133,897	(¹)
Total.....	11	9,150	531,791	49,011	2,271	1,785,010	(¹)
Virginia.....	28	(¹)	165,366	7,625	(¹)	207,541	(¹)
Wisconsin:							
Green Bay.....	1	(¹)	2,557	50	(¹)	2,456	(¹)
Kenosha.....	2	(¹)	4,230	72	(¹)	4,055	(¹)
Milwaukee.....	3	(¹)	168,520	6,342	(¹)	162,486	(¹)
Racine.....	2	(¹)	3,893	66	(¹)	2,805	(¹)
Superior.....	2	(¹)	945	14	(¹)	694	(¹)
Total.....	10	2,371	179,945	6,544	(¹)	172,496	(¹)

¹ No data.² Law makes no provision for capital stock.

In Table 2 the attempt was made to show, as far as data are available, the growth of the credit union movement in the various States.

TABLE 2.—DEVELOPMENT OF CREDIT UNION MOVEMENT IN SPECIFIED STATES

State and year	Number of societies	Number of members	Paid-in share capital	Guaranty fund	Total assets	Deposits	Loans made during year
Massachusetts:							
1911 ¹	17	(²)	\$19,623	\$248	\$25,942	\$5,155	(²)
1912 ¹	26	(²)	64,910	1,150	91,510	21,948	(²)
1913 ¹	34	(²)	120,284	3,495	180,923	50,308	(²)
1914 ¹	50	6,149	177,657	6,147	269,431	78,892	\$371,353
1915 ¹	47	7,846	252,218	7,768	418,026	143,592	501,349
1916 ¹	53	11,418	436,164	15,395	868,350	328,103	831,544
1917 ¹	56	14,821	593,020	27,330	1,235,756	561,962	1,095,778
1918 ¹	59	17,636	874,542	42,407	1,962,556	978,495	1,477,215
1919 ¹	60	22,967	1,372,322	64,335	2,769,948	1,239,515	2,153,842
1920 ¹	65	29,494	1,938,844	97,910	3,966,278	1,784,581	3,311,698
							Loans outstanding at end of year
1921 ¹	82	32,226	2,132,269	140,482	4,047,173	1,586,873	\$3,314,370
1922 ¹	86	37,797	2,429,077	196,295	5,021,265	2,181,245	3,832,709
1923 ¹	90	44,969	3,072,899	245,654	6,297,241	2,675,420	4,766,497
1924 ¹	89	(²)	3,777,918	291,963	7,460,810	3,006,462	5,706,018
1925 ¹	86	55,218	4,501,152	359,031	8,669,769	3,347,353	6,749,739
1926 ³	205	74,797	6,726,097	440,766	10,999,542	3,374,358	9,022,552
1927 ³	279	88,710	8,472,334	552,368	13,444,931	3,831,939	10,738,759
1928 ³	296	98,402	9,794,599	654,690	15,137,872	4,036,811	11,785,070
Minnesota:³							
1927	12	3,203	64,451	2,126	215,655	139,478	116,398
1928	35	6,111	183,006	5,125	389,983	192,438	258,864
							Loans made during year
New Jersey:³							
1925	4	1,512	(⁴)	(²)	73,349	66,992	\$51,162
1926	6	2,306	(⁴)	(²)	109,321	104,599	60,911
1927	6	2,784	(⁴)	(²)	148,971	127,242	94,799
1928	8	2,462	(⁴)	(²)	178,614	170,078	99,482
							Loans outstanding at end of year
New York:³							
1915	17	2,402	53,353	1,185	(²)	4,480	\$49,768
1916	29	5,941	152,407	5,829	210,000	29,148	150,624
1917	39	9,404	332,509	13,266	465,367	53,633	319,809
1918	41	9,790	447,332	19,958	568,034	50,390	424,170
1919	49	14,061	925,742	36,822	1,153,505	73,845	994,968
1920	70	22,321	1,773,315	74,623	2,303,871	271,003	1,960,735
1921	85	33,480	3,434,097	162,201	4,445,297	443,907	3,904,583
1922	101	45,244	5,472,137	309,177	6,837,031	566,650	6,019,574
1923	106	52,234	6,883,621	465,355	8,506,265	558,432	7,584,453
1924	114	64,001	8,578,567	592,188	10,550,007	664,704	9,292,602
1925	120	68,067	10,053,313	705,364	12,093,982	459,156	10,242,566
1926	116	67,119	10,203,634	778,612	12,530,170	525,442	10,735,847
1927	113	71,356	10,423,006	911,183	13,043,245	565,483	11,256,991
1928	118	75,040	10,555,001	1,130,460	13,386,505	731,894	11,643,099

¹ Data as of Oct. 31.² No data.³ Data as of Dec. 31.⁴ Law makes no provision for share capital.⁵ Approximate.

UNEMPLOYMENT SURVEYS

Unemployment Survey of Philadelphia, 1929

A SURVEY of unemployment in Philadelphia was made in April, 1929, by attendance officers of the bureau of compulsory education of that city in cooperation with the Wharton School of Finance and Commerce, and an analysis of the results of the survey are given in a study prepared by J. Frederic Dewhurst and Ernest A. Tupper.

The canvass included 31,551 families so distributed as to constitute, in the judgment of those planning the survey, a fairly representative sample of the population of Philadelphia. It was found that 7.8 per cent of the 58,866 wage earners in these families were idle because of inability to find work. An additional 2.6 per cent were idle on account of sickness or from other causes, making a total of 10.4 per cent of the wage earners covered. There are great variations in the percentages of unemployment reported for different districts and for different occupational groups.

Greater unemployment among industrial workers was indicated, one-half of the 102 industrial blocks having more than 11.5 per cent of their workers unemployed, while in blocks in which the professional occupations predominated the corresponding median percentage was 1.8. The largest group of idle in manufacturing was found in the clothing and textile group, which constituted about 15 per cent of the unemployed for all reasons. In only one of the 10 districts included in the study was a decided exception shown to the usual tendency for unemployment to be more severe among the poorer people. All of the family groups with more than six members had very high percentages of their wage earners idle from all causes—in one group the proportion reaching 25 per cent. Comparing the findings of the investigation with estimates based upon the United States Census figures, unemployment because of inability to find work was found to be more severe among males than females and also greater among persons under 21 years of age than among those 21 years of age and over.

A more detailed summary of the report of this investigation is given below.

Scope and Method of Investigation

RECOGNIZING unemployment as a vitally important community problem in Philadelphia, the department of industrial research of the Wharton School of Finance and Commerce, University of Pennsylvania, has undertaken a series of studies on this subject, the first of these being an effort to establish statistical data for measuring, from time to time, the number of unemployed in that city. This initial

survey is the one under review. The study was made in cooperation with the bureau of compulsory education of the Philadelphia Board of Public Education, school attendance officers collecting the data from the 10 school districts from April 15-24, 1929. The compilation and analysis of the information thus gathered were made by the department of industrial research.

The 166 blocks covered by the attendance officers were selected with a view to giving adequate representation to people of different economic status and to racial variations. Effort was also made to have the proportion of the families in a given district who were included in the study correspond with the proportion which families living in that district constituted of the total number of families in Philadelphia. According to the report, the sample thus secured was an adequate and accurate cross-section of the population of the city.

The questionnaire called for the following data:

For each family interviewed—

1. Address of family.
2. Number of persons in family.
3. Number of persons in family usually employed.
4. Number of persons usually employed who were unemployed at the time of the survey.
5. Race—White, Negro, or Monogolian.

For each unemployed person in families having unemployment—

1. Relationship to family (father, son, etc.).
2. Sex.
3. Age (under 21 or 21 and over).
4. Regular occupation.
5. Reason for unemployment.
6. Time lost since last regular work.

Because of the limited time and the possibility of jeopardizing the existing friendly relations between the school-attendance officers and the families in their districts, certain data that would have been very interesting were not requested; for example, part-time employment, the occupations of the employed, and the approximate ages of the workers covered in the survey.

In Table 1 a comparison is shown between the sample of the population included in the unemployment survey and the estimates of the city's population in 1929 based on the United States Census reports:

TABLE 1.—COMPARISON OF NUMBER OF FAMILIES AND OF PERSONS IN UNEMPLOYMENT SURVEY WITH ESTIMATES FOR ENTIRE POPULATION OF PHILADELPHIA

Item	Unemployment survey	Estimates based on census reports	Per cent in unemployment survey
Number of families.....	31, 551	481, 630	6.6
Number of persons.....	¹ 140, 174	2, 071, 000	6.8
Average number of persons per family.....	4.4	4.3	
Number of persons usually employed.....	58, 866	931, 950	6.3
Number of persons per family usually employed.....	1.9	1.9	
Number of white persons.....	123, 663	1, 871, 000	6.6
Number of colored persons.....	12, 346	200, 000	6.2

¹ Includes 4,165 persons for whom color was not specified.

Extent of Unemployment

OF THE 31,551 families in Philadelphia included in the study, 4,914 or 15.6 per cent, reported one or more of their members unemployed, while 6,110, or 10.4 per cent, of the 58,866 wage earners in these families were not employed when the enumeration was made. These figures include not only persons who were able and willing to work and were unemployed because they could not find jobs, but also those idle because of sickness, superannuation, or indifference. Persons who were wholly and permanently disabled for work of any kind, however, were not included in the group of unemployed on account of sickness and were not reported as unemployed; nor were persons of advanced age who no longer wished to work or who stated they were retired reported as unemployed.

Whether this estimate represents the city's "normal," "abnormal," or "subnormal" unemployment is a matter of conjecture because of the almost total lack of comparable statistics. A survey made in March and April, 1915, by the Metropolitan Life Insurance Co.² showed that 14.2 per cent of 79,058 families in Philadelphia were suffering unemployment and that 10.3 per cent of the 137,244 wage earners in these families were idle at the time the enumeration was made. Unemployment in Philadelphia, therefore, seems to have been as severe last spring as it was when business was beginning to recuperate from the 1914 depression. This is quite striking when it is recalled that the 1929 survey was made at a period when the city's business was reported to be progressing at a fairly normal rate of activity.

The severity of unemployment for all reasons varied greatly for the different districts, being as low as 5.3 per cent in district 1 and as high as 18.9 per cent in district 3. In four districts the percentage was substantially higher than 10.4—the average for all districts—and in three other districts considerably below that. The percentages for individual blocks show even greater variations, unemployment reaching 30 per cent in certain overcrowded and poor parts of South Philadelphia, while in a few of the high-grade residential blocks no unemployed workers were reported.

Racial Differences and Unemployment

IN GENERAL, districts in which native white residents predominated had less unemployment than those in which there was a preponderance of foreign born and negroes. Districts 3 and 6 offer a striking illustration of this, having the greatest proportion of foreign-born residents and the most severe unemployment. District 7, however, which includes part of the Kensington textile section, was an exception, the native born predominating there and unemployment being considerably above the average for all districts. An analysis of the reports for individual blocks brought out the general tendency even more strikingly.

The figures show a relatively heavier proportion of negro workers unemployed than white workers. Inability to find work, of course, indicates more accurately the comparative job opportunities of the two groups than do the figures for unemployment from all causes. The contrast was outstanding in district 10, in which 29.2 per cent of the negroes and only 6.8 per cent of the white workers were un-

²U. S. Bureau of Labor Statistics Bul. No. 195. Unemployment in the United States, p. 6. Washington, July, 1916.

employed because they could not find jobs. In three of the districts over 20 per cent of the negroes were unable to find work, while the highest percentage of unemployment from this cause among white workers was 14 in district 3 in South Philadelphia. According to the report, the more severe unemployment among negroes is due to their lack of education and the customary restriction of their job opportunities mainly to casual and manual work and domestic service, in which jobs are likely to be rather temporary in character.

Unemployment and Occupational Status

As THE investigators secured detailed occupational data for the unemployed persons only, it is not possible to determine very accurately the unemployment in each occupation. The burden of unemployment, however, was found heavy in districts which were overwhelmingly industrial. For example, in districts 3 and 6, in which all of the blocks were reported as industrial, the percentage of unemployment from all causes was 18.9 and 14.8, respectively. On the other hand, in district 1, with a predominance of professional, clerical, and trade occupations, the percentage of workers idle was 5.3. The data for individual blocks show even more conclusively greater unemployment among industrial workers, one-half of the 102 industrial blocks having more than 11.5 per cent of the workers unemployed while in blocks in which professional occupations predominated the corresponding median percentage of unemployment was 1.8.

Table 2 gives in some detail the industrial or occupational distribution of the unemployed in Philadelphia. The classification which is used in taking the census of the city's school children, while sufficiently detailed for the purpose for which it was designed, was not entirely satisfactory for use in a survey of unemployment. Very accurate comparisons can not be made as to the ratio of the unemployed to the employed by occupations and industries because such information was not secured for the employed.

TABLE 2.—NUMBER AND PER CENT OF PERSONS UNEMPLOYED FOR ALL REASONS, BY INDUSTRY OR OCCUPATION

Industry or occupation	Number of persons unemployed	Per cent of total	Industry or occupation	Number of persons unemployed	Per cent of total
Agriculture.....	23	0.4	Trade and transportation:		
Building trades.....	739	12.5	Cashiers.....	19	0.3
Manufacturing:			Cash girls and bundle wrappers.....	13	.2
Chemicals, paints, drugs, dyes.....	67	1.1	Errand, messenger, and office boys.....	70	1.2
Cigars and tobacco.....	60	1.0	Office help.....	338	5.7
Clay, stone, and glass products.....	61	1.0	Sales people.....	158	2.7
Food products.....	197	3.3	Shipping and stock clerks.....	75	1.3
Leather and rubber goods.....	75	1.3	Street trades.....	39	.6
Machinists and metal workers.....	518	8.8	Telephone and telegraph operators.....	18	.3
Printing and paper goods.....	131	2.2	Miscellaneous.....	508	8.6
Clothing, textiles, knit goods, hosiery, and dyes.....	886	15.0	Total.....	1,238	20.9
Wood manufacturers.....	91	1.5			
Miscellaneous.....	681	11.5	General:		
Total.....	2,767	46.7	Chauffeurs.....	116	2.0
Personal and professional service:			Helpers.....	13	.2
Housework in home.....	121	2.0	Laborers.....	397	6.7
Domestic and personal service elsewhere.....	378	6.4	Total.....	526	8.9
Musicians, actors, etc.....	64	1.1	No regular occupation.....	67	1.1
Total.....	563	9.5	Not specified.....	187	
			Grand total.....	6,110	100.0

Among the unemployed workers in manufacturing, those in the clothing and textile group constituted the largest proportion—15 per cent of all the unemployed whose occupations were reported. Comparing this percentage with the estimated proportion of workers in the textile industries, based on United States census figures, the investigators conclude that unemployment was relatively more severe among such workers. Machinists and metal workers made up 8.8 per cent of the unemployed, which was a greater proportion than such workers constituted of all occupied persons. Among the reported occupations of unemployed persons, the building trades, general labor, domestic and personal service, sales people, and office work are heavily represented.

Unemployment and Economic Status

WHILE it was not practicable to secure specific data from the families covered by the study on the economic status of their wage earners, certain information was available which made it feasible to compare unemployment and income. The school census enumerators making the field survey, who were familiar with conditions in their districts, were asked to classify the blocks included in the study as high, low, or medium, according to the economic status of the residents.

None of the blocks classified as high to medium had unemployment above 10 per cent, which was approximately the city average, while the average unemployment in this group of blocks taken as a whole was 5.6 per cent. Of the 75 blocks described as lowest in economic status, 45 experienced greater unemployment than the city average, while the average unemployment among the workers residing in these blocks was 11.7 per cent. Half of the blocks of medium economic character had more than 10 per cent unemployment, while the percentage of idle workers in these blocks was 9.9 per cent—between the extremes for the other two groups.

In the winter of 1927-28 Dr. F. R. Cawl, of the University of Pennsylvania, made an investigation of family incomes in Philadelphia. It was found, of course, that in different sections such incomes varied widely from the average of the city—\$2,581—being as low as \$1,346 in South Philadelphia and as high as \$7,390 in Chestnut Hill and \$13,409 northwest of Fairmount Park. In Table 3 are shown the estimated average incomes among the families included in the 1929 unemployment survey, by districts, and the average per capita income in such families, calculated from the data gathered by Doctor Cawl:

TABLE 3.—UNEMPLOYMENT AND INCOME IN SCHOOL DISTRICTS OF PHILADELPHIA

District	Number of families	Average size of family	Average family income	Average per capita income	Unemployment	Unable to find work
					<i>Per cent</i>	<i>Per cent</i>
District 1.....	2,445	4.2	\$3,208	\$769	5.3	4.1
District 2.....	2,738	4.8	2,035	420	11.6	8.6
District 3.....	2,114	5.3	2,321	441	18.9	14.7
District 4.....	3,075	4.5	2,496	558	9.9	7.2
District 5.....	3,248	4.9	2,210	453	9.5	6.9
District 6.....	2,657	4.0	2,341	588	14.8	11.2
District 7.....	3,129	4.6	1,939	418	14.6	11.8
District 8.....	4,922	4.3	2,817	649	6.9	4.9
District 9.....	4,387	3.9	2,587	658	6.3	4.8
District 10.....	2,836	4.4	2,166	498	10.3	7.4
All districts.....	31,551	4.4	2,440	550	10.4	7.8

It will be noted from the above table that in the three districts (Nos. 1, 8, and 9) with the highest per capita income there was less unemployment than in other districts. In only one district, No. 6, was there a decided exception shown to the usual tendency for unemployment to be more severe among the poorer people.

Unemployment in Relation to Size of Family

SINCE the larger families had a greater number of wage earners, the actual severity of unemployment is adequately measured not by the percentage of families having unemployment, but by the percentage of unemployed wage earners in each family group. The last two columns of Table 4 indicate quite clearly the more severe unemployment from all causes among very large families, except in the case of the small group of "families" of single persons, among whom the percentage of unemployment was 16.5.

TABLE 4.—UNEMPLOYMENT IN FAMILIES OF DIFFERENT SIZES

Number in family	Number of families	Families with unemployment		Number of persons usually employed	Persons unemployed	
		Number	Per cent		Number	Per cent
1 person.....	680	91	13.4	552	91	16.5
2 persons.....	4,967	481	9.7	6,149	530	8.6
3 persons.....	5,868	602	11.8	8,633	797	9.2
4 persons.....	6,851	822	12.0	11,868	980	8.3
5 persons.....	4,929	782	15.9	9,716	962	9.9
6 persons.....	3,501	701	20.0	8,014	866	10.8
7 persons.....	2,068	501	24.2	5,338	684	12.8
8 persons.....	1,248	315	25.2	3,530	420	11.9
9 persons.....	679	224	33.0	2,154	311	14.4
10 persons.....	397	143	36.0	1,390	195	14.0
11 persons.....	185	86	46.5	697	130	18.7
12 persons.....	88	35	39.8	381	60	15.7
13 persons.....	48	19	39.6	224	40	17.9
14 persons.....	19	12	63.2	96	24	25.0
15 persons.....	12	5	41.7	67	12	17.9
16 and more persons.....	11	5	45.5	57	8	14.0
Total.....	31,551	4,914	15.6	58,866	6,110	10.4

As indicated in the above tabulation, the families with fewer than 6 members reported a smaller percentage of wage earners idle than the general average for the city—10.4 per cent. The percentage of unemployed workers in families with 6 members was 10.8, and all of the family groups with more than 6 members had still greater proportions of their wage earners idle, amounting to as much as 25 per cent in the case of families with 14 members.

Of the total of 31,551 families included in the survey, 8,256 had six or more members. This group reported 2,750 of their 21,948 working members, or 12.5 per cent unemployed, while unemployment among the wage earners or families with two to five members amounted to only 9 per cent. Thus, unemployment was nearly 40 per cent more severe among the large, than among the small families. As might be expected, unemployment was greater among the small group represented by "families of one," consisting of single persons without actual family responsibilities, than among the wage earners with larger families.

Classification of Unemployed by Sex and Age

OF THOSE unemployed because of inability to find work, 76.6 per cent were males and 23.4 females. Using the United States census

of occupations as the basis, it is estimated that about 27 per cent of all persons in Philadelphia having gainful occupations are females. This would seem to indicate, according to the report, that unemployment due to inability to find work was not so severe among females as among males, taking the city as a whole. In confirmation of this, it is pointed out that at the time of the survey the mercantile and clerical trades in which women are chiefly employed were more active than the industries in which male workers predominate. Almost one-fourth of all the unemployed persons unable to find work—nearly one-fifth of the males and over one-third of the females—were reported as being under 21 years of age. Comparing this age distribution with estimates based upon the 1920 census, the indications seem to be that unemployment was much more severe in this younger group than among persons 21 years of age or older. Since it was not feasible to obtain detailed data on the ages of the unemployed, the investigation throws no light upon the problem of unemployment among middle-aged and older workers.

Reasons for Unemployment

INABILITY to find work accounted for more than 75 per cent of the unemployment in the city as a whole, it being estimated that 72,700 of Philadelphia's wage earners were idle at the time of the survey because they could not find jobs. Slightly over 14.2 per cent of the unemployment was due to sickness, and 5 per cent to superannuation or old age, exclusive of those who had definitely retired and who were not covered in the report. Only 4.3 per cent of the unemployed or approximately 0.4 per cent of all persons ordinarily at work were reported idle because of indifference or unwillingness to work. Only 0.1 per cent of the unemployed reported themselves idle because of strikes.

Manufacturing, building trades, and "general" occupations, which include chauffeurs, helpers and laborers, showed the largest proportions unable to find work, while in agriculture and personal and professional service, scarcity of jobs was relatively less important as a cause of unemployment. In the latter group of occupations, where considerable numbers of women are employed, sickness accounted for an unusually large amount of unemployment, as was also true for agriculture. Old age and indifference were factors responsible for only a small amount of unemployment in most of the occupations, but were particularly important in agriculture and in the casual labor group which reported no regular occupation, and in the group for which no information on occupations could be obtained.

Duration of Unemployment

It was found that 77 per cent of the unemployed persons had been without regular work for more than one month; 50.6 per cent for more than three months; 28.5 per cent for more than six months; and 11.6 per cent for over a year. When these percentages are applied to the 96,900 Philadelphia wage earners estimated as unemployed, 49,000 are shown to have been without regular work for over three months; 27,600 for over six months; and 11,200 for over a year.

A comparison between the duration of unemployment in the different districts and the causes of unemployment suggests that the periods of idleness were probably more protracted in districts in which sick-

ness and superannuation were relatively more important reasons for unemployment.

Nearly 51 per cent of all the unemployed had had no regular jobs for over three months as compared with 46 per cent of those who were idle because they could not find work, while 61.2 per cent of those giving sickness as a reason for unemployment and 88.8 per cent of the superannuated had had no regular work for the same length of time. Only 5.8 per cent of those reported unemployed because they could not find work had been over a year without regular work, while 26.6 per cent of the idle because of sickness and 55.4 per cent of the superannuated are recorded as being more than 12 months without regular jobs.

The duration of unemployment because of inability to find work was markedly more protracted among males than among females, as indicated by the percentages presented in Table 5:

TABLE 5.—TIME LOST BY PERSONS UNABLE TO FIND WORK SINCE LAST REGULAR JOB, BY SEX

Time lost	Males	Females	Total
	<i>Per cent</i>	<i>Per cent</i>	<i>Per cent</i>
1 day and over.....	100.0	100.0	¹ 100.0
More than 1 month.....	77.8	67.9	75.6
More than 3 months.....	48.3	37.7	46.0
More than 6 months.....	23.0	17.6	21.8
More than 1 year.....	6.2	4.1	5.8

¹ Included 292 unemployed who did not specify time lost since last regular job.

As previously pointed out, the proportion of negroes unemployed was relatively greater than the proportion of whites. Negroes, however, had less protracted periods of unemployment; for example, only 2.1 per cent of the unemployed negroes had been out of regular work for over a year, as compared with 6.6 per cent of the unemployed white persons.

Other Studies of Unemployment Being Carried on by the University of Pennsylvania

AMONG other studies now under way under the direction of the department of industrial research of the Wharton School of Finance and Commerce, University of Pennsylvania, are:

A study of the occupational experiences of 1,000 applicants for work at representative industrial and mercantile establishments in Philadelphia.

Technological changes as a cause of labor displacement in the metal industry.

Methods of finding jobs in the hosiery industry.

Factors responsible for the decline of employment during recent years in the manufacturing industries of Pennsylvania.

Construction of indicators of industrial and employment conditions in Philadelphia.

Unemployment in Buffalo, N. Y., in 1929, with Comparison of Conditions in Columbus, Ohio, in 1921 to 1925

By FRED C. CROXTON and FREDERICK E. CROXTON

Introduction

EARLY in November, 1929, a study was made of unemployment in Buffalo, N. Y., following the same method that was used in a series of five studies in Columbus, Ohio, in 1921, 1922, 1923, 1924, and 1925. The period of the year covered was approximately the same in each of the six studies. Certain results of the several studies are here brought together.

The first study in Columbus¹ was made during the last week of October and the first few days of November, 1921, for the purpose of assisting the Mayor's Emergency Committee on Unemployment in determining the extent of unemployment and underemployment at that time. The study included approximately one-tenth of the gainfully employed population of the city and afforded an excellent basis for determining conditions which then existed. It was realized, however, that practically no information was available with reference to the usual extent of unemployment in industrial communities, and the suggestion was therefore made by the committee that similar studies be conducted at the same time of year for a series of years. It was further suggested that the first series should be followed by other series at different seasons of the year. The studies for the fall season—the last week of October or the week of the last days of October and the first days of November—were continued and the results are available for the five years, 1921 to 1925, inclusive.²

In April, 1929, plans were made by the writers and the New York Department of Labor to begin a series of similar studies in cities of that State. The plan involved cooperation of colleges and universities and in the limited time available Buffalo was the only city in which such cooperation could be developed on a scale sufficiently large. The results of the Buffalo study have just been published.³ The house-to-house canvass was made in Buffalo during the first week of November, 1929, and the major inquiry was with reference to employment status on November 4. The canvass was made by approximately 160 upper-class students in the State Teachers College at Buffalo, University of Buffalo, and Canisius College. These students were given necessary instructions and supervision and were, in most instances, allowed class credit for the work. The data obtained were tabulated by the Bureau of Statistics and Information of the New York Department of Labor.

The house-to-house canvass in the several studies in Columbus was made by students enrolled in the classes in economic statistics and in social statistics of Ohio State University, and a considerable part of the data was tabulated by these same groups.

Three identical industrial areas were covered by each of the five studies in Columbus. Nine industrial areas were studied in Buffalo. In both cities all the areas covered were within the city limits.

¹ For details of this study see Labor Review, April, 1922.

² For details see U. S. Bureau of Labor Statistics, Bul. No. 409.

³ As Special bulletin No. 163, of the New York Department of Labor.

Information concerning employment status was enumerated for all males 18 years of age or over (except those in school) and for those females who were usually gainfully employed.⁴

These studies, therefore, include some males who would be excluded from certain other studies of unemployment, as, for instance, the so-called "unemployables" and "aged men." These studies, however, seek not only to determine for the considerable number of people enumerated, the employment status at the definite time of the study, but also through a series of studies to learn something of the constant personal and family burden arising from unemployment and underemployment. Separation in tabulation of those who are unemployable either from mental or physical disability or from age would be desirable but difficult, for, except in cases of very advanced age or extreme disability, many are found working who are as old or as disabled as so-called unemployables.

Summary of Findings of Buffalo Study

THE Buffalo study, covering 15,164 persons, disclosed 821 who were totally unemployed because of inability to find work; thus 5.4 per cent of normally employed wage earners were unemployed for this reason. There were 1,509 who were totally unemployed (all causes combined), and 981 who had only part-time work. Thus of the whole group, 16.4 per cent were either idle or only partly employed. Of the unemployed from whom data as to the duration of idleness could be obtained, 50 per cent of the men had been out of work less than 10 weeks, and 50 per cent more than 10 weeks, while the corresponding percentages for the women were 62.8 and 37.2.

The greatest cause of unemployment reported was slack work; 54.5 per cent of the males and 58.8 per cent of the females out of work were idle for this reason. Sickness or injury was the next most potent reason for idleness, causing the unemployment of 21.2 per cent of the men and 22.4 per cent of the women. Old age or retirement was also an important cause of unemployment among the men (18.7 per cent) but comparatively unimportant among the women (3.6 per cent).

Scope of Studies

TABLE 1 shows the number of persons covered in the Buffalo study and each of the five Columbus studies. The variation in numbers in the Columbus studies was due partly to movements of population and partly to completeness of coverage. A large part of the shortage in 1924 was due to the fact that four subdistricts were omitted due to the incapacity of several of the student enumerators. The variation in numbers included from this latter cause is believed to have introduced no selective error in the study.

⁴ Thus all housewives were omitted, as were also all women who worked outside the home, on a part-time basis, in addition to their housework. Those women were included who were working full time for pay or profit, and those who were working part time for pay or profit, or who were idle, but who would work full time for pay or profit if such full-time employment were available.

TABLE 1.—NUMBER OF PERSONS REPORTING EMPLOYMENT STATUS, BY SEX

City and year	Males	Fe- males	Both sexes	City and year	Males	Fe- males	Both sexes
Buffalo: 1920.....	12,331	2,833	15,164	Columbus—Continued:			
Columbus:				1923.....	10,173	2,126	12,299
1921.....	9,119	1,967	11,086	1924.....	8,947	1,887	10,834
1922.....	9,984	2,137	12,121	1925.....	10,017	2,134	12,151

Data as to nativity were obtained from 15,030 persons in the Buffalo study and from 11,240 persons in the 1921 Columbus study. Of those in Buffalo 78.3 per cent were native whites, 1.5 per cent were colored, and 20.2 per cent were foreign born. The corresponding percentages in Columbus were 79.4, 7.1, and 13.5 per cent. The Buffalo enumeration included a larger proportion of native white and a correspondingly smaller proportion of foreign born than was shown in the general population given by the 1920 census. It is quite probable, however, that there has been a marked reduction during the nine intervening years in the proportion of foreign born in Buffalo and in many other industrial cities. The Columbus enumeration included a larger proportion of foreign born and a smaller proportion of native colored than the general population, but the Columbus study did not include the East Long Street section, which was at that time the most thickly populated Negro section. Among the foreign born enumerated, Germans show the highest number in both cities, while Italians were the second highest. Other groups numerically important in Buffalo were Poles and Canadians, and in Columbus, Magyar. These four first-mentioned groups comprised 70 per cent of the total number of foreign born enumerated in Buffalo.

The industrial distribution of all persons enumerated is shown in Table 2. In the 1921 study in Columbus, the self-employed (except professional and contractors) were not shown separately. A large proportion of such persons would be classified under trade and transportation.

TABLE 2.—INDUSTRY DISTRIBUTION OF PERSONS ENUMERATED¹

Number

Industry group	Buffalo, 1929	Columbus				
		1921	1922	1923	1924	1925
Agriculture.....		69	59	61	40	42
Professional.....	562	295	277	319	295	292
Clerical (not otherwise specified).....	116	95	60	57	29	12
Domestic and personal service.....	777	1,151	1,329	1,189	1,224	1,296
Government employees (other than teachers).....	919					
Trade and transportation:						
Retail and wholesale trade.....	1,693	1,225	1,007	1,213	1,058	1,059
Telegraph and telephone.....	254	157	123	145	123	154
Railway, express, gas, electric light.....	1,757	1,362	1,295	1,481	1,313	1,553
Water transportation.....	87					
Other.....	696	535	535	450	487	514
Total.....	4,487	3,279	2,960	3,289	2,981	3,280

¹ This table does not include a few persons not reporting as to industry group.

TABLE 2.—INDUSTRY DISTRIBUTION OF PERSONS ENUMERATED—Continued
Number—Continued

Industry group	Buffalo, 1929	Columbus				
		1921	1922	1923	1924	1925
Manufacturing and mechanical pursuits:						
Building trades, contractors.....	347	860	253	332	313	398
Building trades, wage earners.....	384		822	770	759	969
Clay, glass, and stone products.....	98	407	382	463	345	429
Food and kindred products.....	627	606	564	566	538	632
Iron and steel and their products.....	1,456	1,316	1,689	1,792	1,273	1,354
Metal products, other than iron and steel.....	211	119	95	86	72	43
Paper, printing, and publishing.....	290	308	305	300	306	361
Wearing apparel and textiles.....	522	863	892	804	660	807
Automobiles, parts, and tires.....	1,068	539	501	428	472	591
Other.....	1,458	795	600	654	505	624
Total.....	6,961	5,819	6,103	6,195	5,243	6,208
Labor (not otherwise specified).....	78	264	86	157	143	89
Self-employed persons.....	1,063	(¹)	877	926	714	870
Miscellaneous.....	63					
Grand total.....	15,026	10,972	11,751	12,193	10,669	12,089

Per cent

Agriculture.....		0.6	0.5	0.5	0.4	0.3
Professional.....	3.7	2.7	2.4	2.6	2.8	2.4
Clerical (not otherwise specified).....	.8	.9	.5	.5	.3	.1
Domestic and personal service.....	5.2	10.5	11.3	9.8	11.5	10.7
Government employees (other than teachers).....	6.1					
Trade and transportation:						
Retail and wholesale trade.....	11.3	11.2	8.6	9.9	9.9	8.8
Telegraph and telephone.....	1.7	1.4	1.0	1.2	1.2	1.3
Railway, express, gas, electric light.....	11.7	12.4	11.0	12.1	12.3	12.8
Water transportation.....	.6					
Other.....	4.6	4.9	4.6	3.7	4.6	4.3
Total.....	29.9	29.9	25.2	26.9	28.0	27.2
Manufacturing and mechanical pursuits:						
Building trades, contractors.....	2.3	7.9	2.2	2.7	2.9	3.3
Building trades, wage earners.....	5.9		7.0	6.3	7.1	8.0
Clay, glass, and stone products.....	.6	3.7	3.3	3.8	3.2	3.5
Food and kindred products.....	4.2	5.5	4.8	4.6	5.0	5.2
Iron and steel and their products.....	9.7	12.0	14.4	14.7	11.9	11.2
Metal products, other than iron and steel.....	1.4	1.1	.8	.7	.7	.4
Paper, printing, and publishing.....	1.9	2.8	2.6	2.5	2.9	3.0
Wearing apparel and textiles.....	3.5	7.9	7.6	6.6	6.2	6.7
Automobiles, parts, and tires.....	7.1	4.9	4.3	3.5	4.4	4.9
Other.....	9.7	7.2	5.1	5.4	4.7	5.2
Total.....	46.3	53.0	52.1	50.8	49.0	51.4
Labor (not otherwise specified).....	.5	2.4	.7	1.3	1.3	.7
Self-employed persons.....	7.1	(¹)	7.5	7.6	6.7	7.2
Miscellaneous.....	.4					
Grand total.....	100.0	100.0	100.0	100.0	100.0	100.0

¹ Not computed separately in this year.

Employment Status

IN EACH of the six studies the major inquiries concerning each individual included in the enumeration were as to his employment status at the time of the study—that is, whether he had a full-time job, or, if not, what proportion of usual full time he was working, or, if idle, the cause and duration of the idleness.

As here used, the classification "idle," or unemployed, includes voluntary as well as involuntary unemployment. A very few persons reported that they quit their former job to seek other work, and undoubtedly a few persons who were reported "retired" took that step of their own volition, and also a few were retired on pension for disability.

Table 3 shows the employment status of all persons enumerated.

For both males and females, the per cent idle was higher in Buffalo in 1929 than in any of the five years in Columbus except 1921, which was a year of marked unemployment. The per cent of enumerated males employed part time was lower in Buffalo in 1929 than in Columbus in 1921, 1924, and 1925, while the per cent of females on part time was lower in Buffalo in 1929 than in any of the five years 1921 to 1925 in Columbus.

TABLE 3.—EMPLOYMENT STATUS OF PERSONS ENUMERATED, BY SEX

Number

Sex and employment status	Buffalo, 1929	Columbus				
		1921	1922	1923	1924	1925
Males:						
Employed—						
Full time.....	10, 157	6, 853	8, 646	8, 896	7, 053	8, 251
Part time—						
Two-thirds but less than full time.....	374	241	209	275	464	425
One-half but less than two-thirds.....	310	540	272	255	414	373
One-third but less than one-half.....	79	99	40	46	131	80
Less than one-third.....	32	57	22	9	35	41
Not reported.....	38	(¹)	(¹)	(¹)	(¹)	(¹)
Total.....	833	937	543	585	1, 044	919
Idle.....	1, 341	1, 329	795	692	850	847
Total, males.....	12, 331	9, 119	9, 984	10, 173	8, 947	10, 017
Females:						
Employed—						
Full time.....	2, 517	1, 629	1, 808	1, 862	1, 534	1, 761
Part time—						
Two-thirds but less than full time.....	48	39	62	50	75	96
One-half but less than two-thirds.....	62	102	120	96	116	104
One-third but less than one-half.....	18	30	44	29	50	43
Less than one-third.....	12	11	38	9	17	17
Not reported.....	8	(¹)	(¹)	(¹)	(¹)	(¹)
Total.....	148	182	264	184	258	260
Idle.....	168	156	65	80	95	113
Total, females.....	2, 833	1, 967	2, 137	2, 126	1, 887	2, 134

¹ Omitted from this table in the Columbus studies.

TABLE 3.—EMPLOYMENT STATUS OF PERSONS ENUMERATED, BY SEX—Continued

Per cent

Sex and employment status	Buffalo, 1929	Columbus				
		1921	1922	1923	1924	1925
Males:						
Employed—						
Full time.....	82.4	75.1	86.6	87.4	78.8	82.4
Part time—						
Two-thirds but less than full time.....	3.0	2.6	2.1	2.7	5.2	4.2
One-half but less than two-thirds.....	2.5	5.9	2.7	2.5	4.6	3.7
One-third but less than one-half.....	.6	1.1	.4	.5	1.5	.8
Less than one-third.....	.3	.6	.2	.1	.4	.4
Not reported.....	.3	(1)	(1)	(1)	(1)	(1)
Total.....	6.7	10.3	5.4	5.8	11.7	9.1
Idle.....	10.9	14.6	8.0	6.8	9.5	8.5
Total, males.....	100.0	100.0	100.0	100.0	100.0	100.0
Females:						
Employed—						
Full time.....	88.9	82.8	84.6	87.6	81.3	82.5
Part time—						
Two-thirds but less than full time.....	1.7	2.0	2.9	2.4	4.0	4.5
One-half but less than two-thirds.....	2.2	5.2	5.6	4.5	6.1	4.9
One-third but less than one-half.....	.6	1.5	2.1	1.4	2.6	2.0
Less than one-third.....	.4	.6	1.8	.4	.9	.8
Not reported.....	.3	(1)	(1)	(1)	(1)	(1)
Total.....	5.2	9.3	12.4	8.7	13.7	12.2
Idle.....	5.9	7.9	3.0	3.8	5.0	5.3
Total, females.....	100.0	100.0	100.0	100.0	100.0	100.0

¹ Omitted from this table in the Columbus studies.

Table 4 shows the proportion of employment and the proportion of idleness when part time is expressed in terms of equivalent full time.

TABLE 4.—EMPLOYMENT STATUS OF PERSONS ENUMERATED, IN TERMS OF EQUIVALENT FULL TIME¹

City and year	Per cent of time employed		Per cent of time idle	
	Males	Females	Males	Females
Buffalo: 1929.....	86.9	92.1	13.1	7.9
Columbus:				
1921.....	81.4	88.2	18.6	11.8
1922.....	90.1	91.5	9.9	8.5
1923.....	91.4	92.8	8.6	7.2
1924.....	86.5	89.4	13.5	10.6
1925.....	88.5	90.1	11.5	9.9

¹ Part time was reduced to full-time equivalent by considering each group employed part time as concentrated at the mid-point. Thus all those employed "two-thirds but less than full time" have been considered as employed five-sixths of the time and idle one-sixth of the time; those employed "one-half but less than two-thirds time" as employed seven-twelfths of the time and idle five-twelfths of the time, etc. The few who were employed part time but did not report the fractional time worked were not included in this table.

On the basis indicated in Table 4 the males enumerated in Buffalo showed 86.9 per cent employment and 13.1 per cent idleness. During the five years covered in Columbus, idleness of males varied from 8.6

per cent in 1923 to 18.6 per cent in 1921. Over the 5-year period males in Columbus averaged 87.6 per cent of employment and 12.4 per cent of idleness, while the females averaged 90.4 per cent of employment and 9.6 per cent of idleness.

For ready comparison and also to provide a usable measure of unemployment and underemployment, as far as may be disclosed by these six studies, the data in Table 5 are expressed in terms of "per thousand enumerated" rather than in the form of percentages.

TABLE 5.—SUMMARY OF EMPLOYMENT STATUS OF PERSONS ENUMERATED, BY SEX

Sex and employment status	Buffalo, 1929	Columbus				
		1921	1922	1923	1924	1925
Males:						
Employed full time.....	10, 157	6, 853	8, 646	8, 896	7, 053	8, 251
Employed part time.....	833	937	543	585	1, 044	919
Idle.....	1, 341	1, 329	795	692	850	847
Total.....	12, 331	9, 119	9, 984	10, 173	8, 947	10, 017
Females:						
Employed full time.....	2, 517	1, 629	1, 808	1, 862	1, 534	1, 761
Employed part time.....	148	182	264	184	253	260
Idle.....	168	156	65	80	95	113
Total.....	2, 833	1, 967	2, 137	2, 126	1, 887	2, 134

Rate per thousand enumerated

Males:						
Employed full time.....	824	751	866	874	788	824
Employed part time.....	67	103	54	58	117	91
Idle.....	109	146	80	68	95	85
Females:						
Employed full time.....	889	828	846	876	813	825
Employed part time.....	52	93	124	86	137	122
Idle.....	59	79	30	38	50	53

The above table shows that, of every thousand males enumerated in Buffalo in 1929, 109 were idle, 67 had only part-time work, and 824 were employed full time. In Columbus the year which showed the most favorable employment conditions for males was 1923, with 68 idle, 58 employed part time, and 874 employed full time per thousand enumerated. For the five enumerations in Columbus the average for males was 95 idle, 84 employed part time, and 821 employed full time per thousand males enumerated, and the average for females was 50 idle, 112 employed part time, and 838 employed full time per thousand females enumerated.

Data for Columbus were not tabulated to show employment status by nativity. The results for Buffalo disclosed that among the males the native colored had the highest per cent idle and also the highest per cent employed part time. The foreign born had the next highest rate, while the lowest percentage was that of the native whites.

Duration of Unemployment

TABLE 6 shows for those who were idle and reported as to the duration of idleness the number and per cent who had been continuously unemployed for a period less than 10 weeks and those who had been continuously unemployed for 10 weeks or longer. As this table shows, 50 per cent of the unemployed males in Buffalo had been continuously idle for 10 weeks or longer, while in Columbus the proportion ranged from 44.8 in 1923 to 66.7 in 1921.

TABLE 6.—DURATION OF IDLENESS OF UNEMPLOYED PERSONS, BY SEX¹

City and year	Number					
	Males			Females		
	Idle less than 10 weeks	Idle 10 weeks or longer	Total reporting as to duration	Idle less than 10 weeks	Idle 10 weeks or longer	Total reporting as to duration
Buffalo: 1929.....	639	642	1, 281	98	58	156
Columbus:						
1921.....	407	817	1, 224	66	67	133
1922.....	247	443	690	36	19	55
1923.....	351	285	636	53	26	79
1924.....	396	327	723	56	31	87
1925.....	378	447	825	73	39	112

Per cent						
Buffalo: 1929.....	50.0	50.0	100.0	62.8	37.2	100.0
Columbus:						
1921.....	33.3	66.7	100.0	49.6	50.4	100.0
1922.....	35.8	64.2	100.0	65.5	34.5	100.0
1923.....	55.2	44.8	100.0	67.1	32.9	100.0
1924.....	54.8	45.2	100.0	64.4	35.6	100.0
1925.....	45.8	54.2	100.0	65.2	34.8	100.0

¹ Includes only persons reporting as to duration of unemployment.

Cause of Unemployment

TABLE 7 shows the cause of unemployment as reported for those who were idle.

The first two sections of the table give the numbers reporting under each specified cause and the number per thousand enumerated. The number of males idle by reason of slack work, per thousand enumerated, was 59 in Buffalo in 1929 and varied in Columbus from 22 in 1922 to 109 in 1921. The constancy of the rate idle by reason of sickness or injury is striking, as the range for the six studies is only from 18 to 26 per thousand males enumerated and from 13 to 20 per thousand females enumerated. The range in number of males idle by reason of old age or retirement is from 10 to 20 per thousand enumerated.

The third section of the table shows for those unemployed the per cent idle for each specified cause. This section is based upon only the number reporting as to cause of unemployment. Among males enumerated, slack work affected a greater number of persons than any other cause in each of the studies except that of Columbus in 1922. Second in numerical importance was sickness or injury. Strike formed an important cause in Columbus in 1922, but was reported

as a cause in only a very few instances in other years. In the Buffalo enumeration in 1929 only one person reported "strike" as the cause of idleness. In the study in Columbus in 1921, when unemployment was more serious than at the time of any of the other studies, "slack work" so far overshadowed other causes that apparently some persons reported that cause who, under better employment conditions, might have reported sickness or old age as the cause of idleness.

TABLE 7.—CAUSES OF UNEMPLOYMENT, BY SEX

Number

Sex and cause of unemployment	Buffalo, 1929	Columbus				
		1921	1922	1923	1924	1925
Males:						
Slack work.....	724	992	219	253	452	343
Sickness or injury.....	282	164	257	221	191	255
Old age or retirement.....	248	91	145	169	134	198
Miscellaneous or not reported.....	87	82	174	49	73	51
Total.....	1,341	1,329	795	692	850	847
Females:						
Slack work.....	97	87	19	29	39	60
Sickness or injury.....	37	38	31	24	27	42
Old age or retirement.....	6	29	10	8	10	7
Miscellaneous or not reported.....	28	2	5	9	19	4
Total.....	168	156	65	80	95	113

Rate per thousand enumerated

Males:						
Slack work.....	59	109	22	25	51	34
Sickness or injury.....	23	18	26	22	21	26
Old age or retirement.....	20	10	15	16	15	20
Miscellaneous or not reported.....	7	9	17	5	8	5
Females:						
Slack work.....	34	44	9	14	21	28
Sickness or injury.....	13	19	14	16	14	20
Old age or retirement.....	2	15	5	4	5	3
Miscellaneous or not reported.....	10	1	2	4	10	2

Per cent ³

Males:						
Slack work.....	54.5	79.4	28.0	37.5	55.5	40.8
Sickness or injury.....	21.2	13.1	32.8	32.8	23.5	30.3
Old age or retirement.....	18.7	7.3	18.5	25.1	16.5	23.5
Miscellaneous.....	5.6	.2	20.7	4.6	4.5	5.4
Females:						
Slack work.....	58.8	56.5	30.7	36.3	43.3	53.1
Sickness or injury.....	22.4	24.7	50.0	42.5	30.0	37.2
Old age or retirement.....	3.6	18.8	16.1	10.0	11.1	6.2
Miscellaneous.....	15.2	—	3.2	11.2	15.6	3.5

¹ Including 153 idle because of strike.² Including 15 per thousand idle because of strike.³ Based upon only the number reporting cause of unemployment.⁴ Including 19.5 per cent idle because of strike.

Duration and Cause of Unemployment

TABLE 8 presents a comparative summary of the percentage of males unemployed because of slack work or because of sickness or injury. No percentages are shown for females, owing to the small number involved.

This table shows wide fluctuations in the percentage idle for any specified length of time because of slack work. Thus, the percentage

idle for less than four weeks because of slack work varied from 15.3 in Columbus in 1921 to 55.7 in Columbus in 1923. Idleness for the same length of time because of sickness or injury shows fluctuations from 12.1 per cent in Columbus in 1921 to 30.4 per cent in Columbus in 1923.

TABLE 8.—COMPARATIVE SUMMARY OF MALES IDLE BECAUSE OF SLACK WORK OR BECAUSE OF SICKNESS OR INJURY¹

City and year	Per cent of males unemployed because of slack work, who were idle—				Per cent of males unemployed because of sickness or injury, who were idle—			
	Less than 2 weeks	Less than 4 weeks	Less than 10 weeks	Ten weeks or longer	Less than 2 weeks	Less than 4 weeks	Less than 10 weeks	Ten weeks or longer
Buffalo: 1920.....	15.8	39.0	69.1	30.9	4.8	18.0	36.3	63.7
Columbus:								
1921.....	6.9	15.3	34.9	65.1	4.7	12.1	26.2	73.8
1922.....	18.2	37.8	59.8	40.2	10.9	26.4	43.6	56.4
1923.....	33.2	55.7	82.3	17.7	13.1	30.4	49.6	50.4
1924.....	12.5	36.1	63.3	36.7	5.9	21.2	41.8	58.2
1925.....	16.1	44.2	67.8	32.2	10.0	24.4	42.0	58.0

¹ Includes only persons reporting as to cause and duration of unemployment.

Industry and Employment Status

THE Buffalo study presents data relative to industry separately for males and females, but unfortunately the Columbus compilations show such information only for both sexes combined. Table 9 shows for all persons enumerated the employment status in each of the three general industry groups—domestic and personal service, trade and transportation, and manufacturing and mechanical pursuits.

TABLE 9.—EMPLOYMENT STATUS IN THREE GENERAL INDUSTRY GROUPS, BOTH SEXES COMBINED¹

Number						
Industry group and city	Year	Em- ployed full time	Employed part time—		Idle	Total
			Two- thirds but less than full time	Less than two- thirds of full time		
Domestic and personal service:						
Buffalo.....	1929	1,477	18	49	146	1,690
Columbus.....	1921	907	14	98	89	1,108
	1922	1,080	44	149	52	1,325
	1923	1,024	24	68	71	1,187
	1924	1,019	37	92	72	1,228
	1925	1,000	57	106	131	1,294
Trade and transportation:						
Buffalo.....	1929	4,092	47	68	274	4,481
Columbus.....	1921	2,866	34	112	234	3,246
	1922	2,625	34	76	218	2,955
	1923	3,064	59	45	114	3,282
	1924	2,717	64	68	114	2,965
	1925	2,997	46	69	166	3,278
Manufacturing and mechanical pursuits:						
Buffalo.....	1929	5,443	340	336	828	6,947
Columbus.....	1921	4,132	222	574	798	5,726
	1922	5,416	172	231	278	6,097
	1923	5,271	218	279	405	6,173
	1924	3,795	414	533	461	5,203
	1925	4,904	395	406	496	6,201

¹ Includes only persons reporting as to industry group and as to employment status.

TABLE 9.—EMPLOYMENT STATUS IN THREE GENERAL INDUSTRY GROUPS, BOTH SEXES COMBINED—Continued

Per cent

Industry group and city	Year	Em- ployed full time	Employed part time—		Idle	Total
			Two- thirds but less than full time	Less than two- thirds of full time		
Domestic and personal service:						
Buffalo.....	1929	87.4	1.1	2.9	8.6	100.0
Columbus.....	1921	81.9	1.3	8.8	8.0	100.0
	1922	81.5	3.3	11.3	3.9	100.0
	1923	86.3	2.0	5.7	6.0	100.0
	1924	83.5	3.0	7.6	5.9	100.0
	1925	77.3	4.4	8.2	10.1	100.0
Trade and transportation:						
Buffalo.....	1929	91.3	1.1	1.5	6.1	100.0
Columbus.....	1921	88.3	1.0	3.5	7.2	100.0
	1922	88.9	1.2	2.6	7.4	100.0
	1923	93.4	1.8	1.4	3.5	100.0
	1924	91.7	2.2	2.3	3.8	100.0
	1925	91.4	1.4	2.1	5.1	100.0
Manufacturing and mechanical pursuits:						
Buffalo.....	1929	78.4	4.9	4.8	11.9	100.0
Columbus.....	1921	72.2	3.9	10.0	13.9	100.0
	1922	88.8	2.8	3.8	4.6	100.0
	1923	85.4	3.5	4.5	6.6	100.0
	1924	72.9	8.0	10.2	8.9	100.0
	1925	79.1	6.4	6.5	8.0	100.0

While a larger proportion of persons was employed full time in domestic and personal service in Buffalo in 1929 than in any of the earlier years in Columbus, there was also a greater percentage of persons idle in Buffalo than in any other year in Columbus save 1925. Those employed part time, however, constituted a smaller proportion in Buffalo than in any of the Columbus studies. In trade and transportation the per cent of persons idle in Buffalo was smaller than in 1921 or 1922 in Columbus and likewise the per cent of persons working full time was greater in Buffalo than in either 1921 or 1922 in Columbus. In manufacturing and mechanical pursuits in Buffalo there was a greater percentage of persons idle than in any year in Columbus except 1921. A larger proportion were working full time in Buffalo than in Columbus in either 1921 or 1924. Part-time workers in this industry in Buffalo were relatively more numerous than in either 1922 or 1923 in Columbus.

Table 10 shows the employment for all persons enumerated in four of the industries most important from the standpoint of numbers reported in the several enumerations. In retail and wholesale trade the per cent of persons idle in Buffalo was approximately the same as in Columbus in 1921 and in 1925. Of those persons engaged in retail and wholesale trade in Buffalo 6.2 per cent were idle; in Columbus the per cent idle varied from 2.8 in 1922 to 6.2 in 1921. The per cent of persons employed full time was 91.4 in Buffalo and varied in Columbus from 89.5 in 1921 to 94.7 in 1923. In railway, express, gas, and electric light 6.7 per cent of those enumerated in Buffalo were idle and 90.8 per cent were employed full time. In this same industry in Columbus the per cent of persons idle ranged from 3.6 in 1923 to 13.2

in 1922 and the per cent employed full time varied from 83.0 in 1922 to 91.8 in 1923. In the building trades in Buffalo very severe unemployment was shown. Of those enumerated in this industry 21.6 per cent were idle, 10.6 per cent were on part time, and but 67.8 per cent were employed full time. Nearly one out of every three persons in this industry was either idle or on part time. The most severe year in this industry in Columbus was 1921, when 13.3 per cent were idle and 14.2 were on part time. However, in 1925 there was nearly as much unemployment, for 12.3 per cent were idle and 14.5 per cent were on part time. The proportion of persons in the building trades in Columbus who were idle varied from 5.6 per cent in 1922 to 13.3 per cent in 1921. Very marked fluctuations were present in the per cent of those idle in the iron and steel industry in Columbus. In 1922 the percentage of idle was 5.1, while in 1921 it was 26.8. The proportion of persons on part time in the iron and steel industry in Columbus ranged from 5.4 per cent in 1922 to 23.3 per cent in 1921. In 1921 in Columbus the proportion of those who were either idle or on part time was 50.1 per cent, or almost exactly one out of every two persons in the industry. In Buffalo 10.2 per cent of those enumerated in this industry were idle, 9.6 were on part time, and 80.2 were employed full time.

TABLE 10.—EMPLOYMENT STATUS IN FOUR IMPORTANT INDUSTRIES, BOTH SEXES COMBINED¹

Industry and city	Year	Em- ployed full time	Employed part time—		Idle	Total
			Two- thirds but less than full time	Less than two- thirds of full time		
Retail and wholesale trade:						
Buffalo.....	1929	1,547	17	24	105	1,793
Columbus.....	1921	1,081	5	47	75	1,208
	1922	933	11	32	28	1,004
	1923	1,147	5	22	37	1,211
	1924	974	9	30	38	1,051
	1925	957	13	23	65	1,058
Railway, express, gas, and electric light:						
Buffalo.....	1929	1,592	25	19	118	1,754
Columbus.....	1921	1,162	27	37	128	1,354
	1922	1,072	19	29	171	1,291
	1923	1,358	47	21	53	1,479
	1924	1,165	52	25	61	1,303
	1925	1,419	31	30	72	1,552
Building trades—wage earners and contractors:						
Buffalo.....	1929	831	35	94	265	1,225
Columbus.....	1921	608	24	95	112	839
	1922	921	27	65	60	1,073
	1923	931	25	62	60	1,099
	1924	771	60	106	125	1,059
	1925	998	74	124	167	1,363
Manufacturing iron and steel and their products:						
Buffalo.....	1929	1,165	89	51	148	1,453
Columbus.....	1921	643	68	232	345	1,288
	1922	1,511	47	44	86	1,688
	1923	1,493	88	60	146	1,787
	1924	889	123	141	116	1,269
	1925	1,011	167	68	108	1,354

¹ Includes only persons reporting as to industry and as to employment status.

TABLE 10.—EMPLOYMENT STATUS IN FOUR IMPORTANT INDUSTRIES, BOTH SEXES
COMBINED—Continued

Per cent

Industry and city	Year	Em- ployed full time	Employed part time—		Idle	Total
			Two- thirds but less than full time	Less than two- thirds of full time		
Retail and wholesale trade:						
Buffalo.....	1929	91.4	1.0	1.4	6.2	100.0
Columbus.....	1921	89.5	.4	3.9	6.2	100.0
	1922	92.9	1.1	3.2	2.8	100.0
	1923	94.7	.4	1.8	3.1	100.0
	1924	92.7	.9	2.9	3.6	100.0
	1925	90.5	1.2	2.2	6.1	100.0
Railway, express, gas, and electric light:						
Buffalo.....	1929	90.8	1.4	1.1	6.7	100.0
Columbus.....	1921	85.8	2.0	2.7	9.5	100.0
	1922	83.0	1.5	2.2	13.2	100.0
	1923	91.8	3.2	1.4	3.6	100.0
	1924	89.4	4.0	1.9	4.7	100.0
	1925	91.4	2.0	2.0	4.6	100.0
Building trades—wage earners and contractors:						
Buffalo.....	1929	67.8	2.9	7.7	21.6	100.0
Columbus.....	1921	72.5	2.9	11.3	13.3	100.0
	1922	85.8	2.5	6.1	5.6	100.0
	1923	84.7	2.3	5.6	7.4	100.0
	1924	72.8	5.7	9.7	11.8	100.0
	1925	73.2	5.4	9.1	12.3	100.0
Manufacturing iron and steel and their products:						
Buffalo.....	1929	80.2	6.1	3.5	10.2	100.0
Columbus.....	1921	49.9	5.3	18.0	26.8	100.0
	1922	89.5	2.8	2.6	5.1	100.0
	1923	83.5	4.9	3.4	8.2	100.0
	1924	70.1	9.7	11.1	9.1	100.0
	1925	74.7	12.3	5.0	8.0	100.0

Conclusion

COMPARATIVELY few studies of unemployment have been made in this country. The conditions disclosed by those which have been made, in conjunction with other available information, ought to command careful consideration with a view to the development of measures for reducing involuntary unemployment and underemployment to the minimum.

The six studies here compared show that there is a heavy burden to be borne even when industrial conditions are considered approximately normal. The males idle or having only part-time work, per thousand enumerated, as shown by these six studies were:

City and year	Idle	Employed part time
Buffalo: 1929.....	109	67
Columbus:		
1921.....	146	103
1922.....	80	54
1923.....	68	58
1924.....	95	117
1925.....	85	91

The burden of unemployment and underemployment generally comes most frequently and falls most heavily upon those least able to bear such burden and who have but little, if any, financial reserve. When such persons are compelled to become the recipients of charity in the community, it is extremely difficult to prevent more or less breakdown in the morale and self-dependence of the wage earner and his family even with the most careful work possible on the part of the assisting organization or individual.

Responsibility for reducing unemployment and underemployment to the minimum is not solely a responsibility of government, or of industry, or of the community. Nor can the situation be materially remedied by greater activity and effort on the part of the individuals most affected. It is rather a responsibility of all of these forces working together. It does seem possible, however, to allocate to some extent the responsibility in the matter.

1. The Federal and the State governments ought to be expected to make available reasonably accurate current information on unemployment. No other force can command the facilities for collecting and compiling such information. Furthermore, data collected and compiled by such governmental agencies would be less subject to the charge of bias. Current information would encourage the deliberate consideration of the problem. It also would avoid the necessity of relying upon estimates which vary greatly, and which are usually made only under the stress of serious unemployment.

2. The Federal, State, and local governments could render a most valuable service by developing and maintaining effective employment offices. Such offices supply information concerning available work and available workers and, as need arises, definitely seek out jobs or workers. When adequately supported and properly manned, they can render excellent service both to wage earners and to management and can materially lessen the time lost. To be effective, an employment office must have the continued active support of management and of labor, and the personnel must be selected with a view to competency in that particular work. Excellent individual employment offices have been operated, but only in a few instances have they been coordinated into a system. A general system of employment offices can not be developed without Federal cooperation and, to some extent, supervision, as far as standards are concerned. An incidental, but somewhat important, result of the development of an effective system of employment offices would be the gradual elimination of a certain type of private employment office which exploits wage earners and particularly those in the greatest need of work.

3. The Government can also, to some extent, aid in stabilizing employment by the so-called public-work reserve. Such a plan, however, undoubtedly could be more helpful if there was an effective employment service through which it would be possible to prevent drawing workers hither and yon as public work is made available.

4. Industry—that is, management and labor in cooperation—can best devise, develop, and adopt plans for stabilizing employment within a plant or within an industry. The Government's contribution in such work at this time is probably largely that of making available information as to experiments and accomplishments. In many plants management and labor do not have opportunity for

the experimentation necessary in such difficult pioneer work, but could profit from the experiences of others. One of the interesting industrial experiences during the World War was the unselfish spirit of some of the larger bakeries in freely placing at the disposal of the smaller plants the results of their laboratory tests and their practical experience in using wheat-flour substitutes. Similar services were rendered competitors in many lines of business at that time. This spirit of helpfulness is still alive and doubtless can be enlisted in a cause as important, both from a humane and from a business standpoint, as is that of stabilizing employment and thus relieving, as far as may be possible, the tragedy of jobless workers.

UNEMPLOYMENT INSURANCE AND RELIEF

An English Company's Provisions against Unemployment

IN a lecture delivered September 24, 1929, at Balliol College, Oxford, Mr. B. S. Rowntree gave an account of the measures his firm had undertaken to secure its dismissed workers against unemployment. Up to 1920 no special effort had been made in this direction; dismissals were few, but for those laid off there was no recourse beyond the unemployment benefit of the State insurance scheme. In 1920, however, the firm began a series of definite measures designed to remove as completely as practicable from the minds of the workers any anxiety to which they might be exposed through the possibility of unemployment arising from trade depression.

To this end the directors of the company set aside a sum of £10,000 [\$48,665] per year, or 1 per cent of the wages bill, whichever was the greater, in order to provide benefits supplementary to those given under the State scheme. In the case of persons dismissed, benefits are paid by the company, which, together with the State benefit and any payment from a trade-union, amount to 50 per cent of the average earnings of the unemployed person. Additional benefit is given for a dependent wife and for each of not more than three children under 16 years of age up to a maximum of 75 per cent of the average wage. These benefits are payable for a period proportionate to service. Workers laid off on short time receive benefit at the rate of 80 per cent of what men and women dismissed receive. The annual charge to the company for this assistance has only in one instance reached the maximum of £10,000 [\$48,665] named in the scheme.

In 1924, owing to reorganizations, reduction of the force became necessary, and the company took up seriously the question of helping the dismissed men to get a fresh start. Provision was made for paying over in a capital sum to those dismissed an amount not to exceed 75 per cent of what might be due them as unemployment pay, together with a dismissal gratuity at the rate of one week's salary for each year of continuous service over five years. In addition, a number of officers of the company were appointed to aid those who wished to start in business for themselves by giving advice in such matters as purchasing, advertising, and keeping stock. This aid has been continued, and is used as supplementary to all other plans adopted.

In 1928, when a rather larger number than usual had to be laid off owing to improvements and reorganizations, the company, finding that the labor market in York could not absorb any further surplus labor, tried to secure positions for the workers elsewhere in England, undertaking to pay employers who would take them on £2 (\$9.73) a week for one year, as a contribution toward the cost of training them for new work. As a natural development of this plan, they also undertook to pay the same amount to any of the workers who would

set up in business for themselves. An account of the operation and results of this experiment was given in the *Labor Review* for October 1929.

In 1929 it again became necessary to reduce the force, and new measures to prevent unemployment were devised, which are thus described in the lecture mentioned above:

Soon after the beginning of the present year it became evident that it would be necessary to dispense with the services of further men. It was undesirable to withdraw these men from York in any large numbers. Further, it was less economical to make a payment out of revenue than to make a capital investment. Following the principle that the only real remedy for unemployment is to find other work, the directors decided to invest capital in fresh industries in York. They realized that the line of development where one industry was needing fewer workers was to inaugurate other industries which were likely to increase in strength and in their demands for labor. Obviously, these must be industries which employed adult male labor, where the bulk of the work can be done by men without special training and where really good wages can ultimately be paid.

Much research was put into the matter of discovering industries that met these conditions. Eventually three industries concerned with new processes or patents were found and arrangements made by the directors of Rowntree & Co. (Ltd.) to supply the necessary capital and the administration. The services of the patentees having been secured, all technical information will be available. By reason of the fact that the products are among those for which there is a growing demand, no difficulty is anticipated in marketing the goods that will be produced. There is abundant evidence that for some time to come the companies will not be able to turn out all that is asked for.

Altogether three small factories have been started in York. Rowntree & Co. (Ltd.) owned a factory which had been bought during the war as a warehouse and was standing empty. This has been so adapted that the three small factories named above can be conducted in it. Up to date only one is actually functioning and is finding employment for 13 men. It is expected that within a month the two others will also be functioning and that altogether 60 men will be employed by the three concerns by the end of the year. This number will increase considerably in time, and with increased sales every effort will be made to pay higher and higher wages.

Program for Regularizing Employment and Decreasing Unemployment in Philadelphia

A REPORT offering a program for regularizing employment and decreasing unemployment in Philadelphia has recently been formulated by a subcommittee of the Philadelphia Chamber of Commerce.¹ In submitting the plan the subcommittee states that a number of agencies in the community are already interested in some phase of the subject and willing to do their share in promoting a plan to cope with employment problems and that if one community takes the lead in analyzing such problems others will follow.

The committee stresses the importance of regularizing employment from both the business and social standpoints. Business, it states, must turn earnest thought and managerial invention to the task of regularizing employment, always keeping in mind the fact that irregularity of employment and unemployment spring from such a variety of causes that the problem may not be approached from the angle of individual establishments only.

¹Philadelphia Chamber of Commerce. Subcommittee to the Industrial Relations Committee. Report: Program for the Regularization of Employment and the Decrease of Unemployment in Philadelphia.

Specific recommendations made are for: (1) An institute for regularization of employment; (2) improvement of the system of bringing jobs and workers together; (3) a prosperity reserve of public work; (4) vocational training and vocational guidance in the public schools; (5) understanding the facts; (6) appointment by the chamber of commerce of a standing committee of five to seven to combat unemployment.

English Unemployment Insurance Bill, 1929

ON NOVEMBER 12, 1929, the Labor Government introduced into Parliament an unemployment insurance bill, which on December 16 passed its third reading and was sent to the House of Lords.¹ The bill changes the former system in three respects: It lowers the age for entering insurance, it increases the benefits for unemployed persons under 20 and for adult dependents, and it changes the conditions under which benefit may be refused on the ground that the applicant is not genuinely seeking work.

Minimum Age of Insurance

UNDER the new bill, the age of entering insurance is to be lowered to 15 years if and when the age for leaving school is raised to 15. The Government has already announced its intention of thus raising the school-leaving age as from January 1, 1931, so that this provision will presumably become effective at that date. Boys and girls aged 15 but under 16 who remain in school may, under certain conditions, be credited as if they had paid unemployment insurance contributions during the period in school.

Rates of Benefit

FOR claimants aged 17, 18, and 19 the bill establishes new rates of benefit, which, with the rates now prevailing, are shown in the following table. For the sake of convenience all ages under 21 are included.

PRESENT AND PROPOSED WEEKLY RATES OF BENEFIT FOR WORKERS UNDER 21

Age	Males				Females			
	Present rate		Proposed rate		Present rate		Proposed rate	
	Shillings	U. S. currency	Shillings	U. S. currency	Shillings	U. S. currency	Shillings	U. S. currency
15.....			6	\$1.46			5	\$1.22
16.....	6	\$1.46	6	1.46	5	\$1.22	5	1.22
17.....	6	1.46	9	2.19	5	1.22	7½	1.83
18.....	10	2.43	14	3.41	8	1.95	12	2.92
19.....	12	2.92	14	3.41	10	2.43	12	2.92
20.....	14	3.41	14	3.41	12	2.92	12	2.92

¹ Ministry of Labor Gazette, December, 1929, pp. 438, 439.

Claimants aged 18, 19, and 20 who receive additional benefit for a dependent will continue as at present to receive the adult rates of 17s. (\$4.14) and 15s. (\$3.65), as well as the dependent's benefit.

The present allowance of 7s. (\$1.70) a week for an adult dependent is increased to 9s. (\$2.19) and the definition of adult dependent is enlarged to take in some classes hitherto excluded. The allowance of 2s. (49 cents) a week for child dependents will become payable for invalid children between the ages of 14 and 16 who are unable to attend school and for younger brothers and sisters who are maintained by a claimant.

"Genuinely Seeking Work" Clause

THE principal struggle over the bill centered on what was known as the fourth statutory condition, which provided that the claimant must prove that he was genuinely seeking work but unable to find suitable employment. The former act contained no statement of what would be regarded as satisfactory proof of a genuine search for work, with the result that standards varied from place to place and, rightly or wrongly, there grew up a strong feeling among the workers that the vague wording of the provision was utilized to debar from benefit many who were rightfully entitled to it. Neither did the former act contain any clear definition of what should be regarded as suitable work. The present bill changes both of these points, throwing upon the authorities the onus of proving that the claimant is not genuinely seeking work, and defining suitable employment. The sections dealing with these matters are as follows:

(1) If on a claim for benefit it is proved by an officer of the Ministry of Labor that the claimant, after a situation in any employment which is suitable in his case has been notified to him by an employment exchange or other recognized agency or by or on behalf of an employer as vacant or about to become vacant, has without good cause refused or failed to apply for such situation, or refused to accept such situation when offered to him, or if it is proved by an officer of the Ministry of Labor that a claimant has without good cause refused or failed to carry out any written directions given to him by an officer of an employment exchange with a view to assisting him to find suitable employment (being directions which were reasonable, having regard both to the circumstances of the claimant and to the means of obtaining that employment usually adopted in the district in which the claimant resides) he shall be disqualified for receiving benefit for a period of six weeks or for such shorter period and from such date as may be determined by the court of referees or the umpire, as the case may be.

(2) For the purposes of this section, employment shall not be deemed to be suitable employment in relation to any claimant if it is either—

(a) Employment in a situation vacant in consequence of a stoppage of work due to a trade dispute; or

(b) Employment in his usual occupation in the district where he was last ordinarily employed at a rate of wage lower, or on conditions less favorable, than those which he might reasonably have expected to obtain, having regard to those which he habitually obtained in his usual occupation in that district, or would have obtained had he continued to be so employed; or

(c) Employment in his usual occupation in any other district at a rate of wage lower, or on conditions less favorable, than those generally observed in that district by agreement between associations of employers and of employees, or, failing any such agreement, than those generally recognized in that district by good employers.

These sections go considerably further in reducing the claimant's responsibility for finding work than was planned in the bill originally introduced by the Ministry of Labor. The original provisions,

however, were so strongly attacked on the ground that they allowed the same kind of discrimination for which the former system had been criticized that the ministry withdrew its own proposition and substituted the sections given above. In a memorandum dealing with the subject the ministry points out that the essential feature in which the new provision differs from the bill as introduced is that the obligation placed on the claimant, so far as his rights to benefit are concerned, is confined to taking steps to search for work in accordance with directions given to him by the employment exchange. The memorandum also states that there is a possibility that the new provision may bring certain other persons into benefit who are not now recorded as unemployed—e. g., married women who have done little or no work since marriage and seasonal workers during the off season.

PENSIONS AND INSURANCE

Annuity Unit Plan of a Large Manufacturing Company

AN ACCOUNT was given in the September issue of the Labor Review (pp. 95, 96) of the industrial pension plan of the Western Clock Co.—a constructive effort on the part of that company to provide security against the loss of the accrued rights of employees to a pension through failure of the company, withdrawal of the plan, or dismissal of the employee. A new pension plan has recently been announced by the Westinghouse Electric & Manufacturing Co. which has some of the features of the Western Clock Co.'s plan, although it does not offer so large a measure of security to the employees.

The new retirement system of the Westinghouse company provides for the voluntary cooperation of the employees, who are given the opportunity to buy annuity units in addition to those provided by the company. The plan provides for retirement at the age of 65 with an annuity depending upon the employee's length of service and salary or wages. Employees covered by the plan receive at the expiration of each year of service an annuity certificate which entitles them to a number of units of income after retirement. The service annuity units provided by the company are deposited in a trust fund administered by a board of trustees consisting of officials of the company and of a bank, with the bank acting as custodian of the funds, while the employees' annuity units are underwritten by one of the large life insurance companies.

All employees who were under 70 years of age on May 1, 1929, the date the plan was effective, were eligible to participate in the plan after a waiting period of one year. Each annuity unit yields \$1 per month beginning at normal retirement age and continuing for life. The number of company units per employee range from one to six, according to the salary grade, and if an employee purchases a number not less than the scheduled number of company units he receives a bonus of one-fourth of a company unit for each one provided by the company. An employee pays for the employee annuity units at the rate for his age at the nearest birthday at the beginning of each annuity year, the monthly payments ranging from \$1.86 for men and \$2.11 for women at the age of 20 to \$9.56 for men and \$10.72 for women at the age of 64. These are the group annuity rates fixed by the insurance company.

In case an employee dies or ceases to be employed by the company prior to reaching retirement age, the full amount paid by him for an employee annuity unit is returned with compound interest at the rate of 3½ per cent per annum, less a cancellation charge of 3½ per cent if his service is terminated within two years after the purchase of his first employee annuity unit. In case an employee does not wish to accept the cash refund, he may continue to make premium

payments on an adjusted basis directly to the insurance company or in case he does not wish to keep up the payments he may accept a certificate for the deferred paid-up units if the total income from such payments would amount to not less than \$10 a month.

Instead of a straight pension terminating upon his death an employee also has the option of converting the company annuity units and the employee annuity units he buys for himself into a joint and survivor annuity, so that after he dies, the income will continue to his widow as long as she may live. Under this joint plan the income is smaller than under the regular pension plan.

It is stated in the plan that while the company desires and expects that the plan will be permanent, the right is reserved to modify it or withdraw it at any time. The trust fund set up by the company insures, however, the honoring of all company annuity units issued up to the time of such action since the annual payments of the company are irrevocably turned over to the board of trustees.

An article in the *Iron Age* of November 21, 1929, states that the coverage of the plan, reckoned according to the method of group insurance, will be \$54,000,000 at the start and \$14,500,000 annually thereafter, and it is estimated that the net annual cost of the plan to the company will be 1.2 per cent of the pay roll.

New English Act for Widows', Orphans', and Old-Age Contributory Pensions

SHORTLY after Parliament assembled in October, 1929, the Government introduced a bill changing in several respects the system of contributory pensions for widows, orphans, and aged persons, which passed rapidly through the usual stages and received the royal assent on December 6, 1929. The main objects of the new act are thus summarized in the Ministry of Labor Gazette for November, 1929:

1. To extend the provision made by the widows', orphans', and old-age contributory pensions act, 1925, to preact widows—i. e., widows of men who died before January 4, 1926.
2. To provide old-age pensions for the wives between the ages of 65 and 70 of men who were over 70 on January 2, 1928, and were entitled to old-age pensions under the old-age pensions acts, 1908 to 1924, by virtue of the act of 1925.
3. To allow pensioners to continue to draw their pensions and insured persons to qualify for pensions by continuing their insurance as voluntary contributors after emigration to the dominions.
4. To relax the qualifying conditions for pensions arising from the insurance of elderly contributors with a long record of insurable employment.
5. To repeal the provision of the act of 1925 which provided for the withholding or reduction of children's allowances and orphans' pensions in cases where compensation had been awarded under the workmen's compensation act.

The most important changes are those respecting preact widows. It is provided that widows between the ages of 55 and 70 of men of the insurable class who died before January 4, 1926, shall be entitled to widows' pensions, and the same provision is made for widows of men who although they survived that date were then over 70, and whose widows were therefore unable to qualify for pensions under the terms of the act of 1925. It is estimated that approximately 500,000 widows, more than half of whom are now over 55, may become

beneficiaries under this provision, and that its cost from the time of adoption to March 31, 1936, will be £37,600,000 (\$182,999,000). As investigation of claims will take considerable time, provision is made for the pensions to begin at different dates, preference being given to the more elderly widows. In the case of widows who reach the age of 60 before January 1, 1931, the pension will be payable as from July 1, 1930, or from the sixtieth birthday if that is the later date; in the case of widows who are over 55 and under 60 on January 1, 1931, the pension will be payable at that date. In all these cases, when the recipient reaches the age of 70 the widow's pension will cease and be replaced by an old-age pension.

Under the act of 1925 widows of these two classes had no claim to a pension unless they had children under the age of 14, and the pension terminated when the youngest child became 14½. Pensions which have already been terminated under this provision will be revived as from January 2, 1930. The number of pensions to be thus revived is estimated at 18,000.

Under the second provision (the grant of old-age pensions at age 65 to wives of men over 70 on January 2, 1928, who were entitled to old-age pensions under the earlier acts) it is estimated that about 24,000 women will benefit. This provision becomes effective on January 2, 1930.

Under the act of 1925 pensions were not payable for any period during which the pensioner was absent from Great Britain, and this fact operated to deter emigration. The present act continues the pension as long as the pensioner is in any of the British dominions, and permits insured persons to keep up the payments qualifying them for future pensions while so absent.

Under the act of 1925 one of the conditions for a widow's or an old-age pension was that the contributions for the last three contribution years should represent on an average not less than a specified number for each of the three years in question, and this provision excluded some whom the system was intended to cover.

Experience has shown that, notwithstanding that weeks of incapacity and weeks of genuine unemployment count for this purpose as weeks for which contributions were paid, a certain number of elderly contributors failed to satisfy this test, although there is every indication that they had been regularly engaged in insurable employment until just before the period to which the test is applied.

To meet this situation the new act provides for the waiving of this average test in the case of an insured person who had been continuously insured for at least 10 years on attaining age 60. Under this provision some 20,000 claims, rejected under the terms of the act of 1925, will become payable as from January 2, 1930.

Another section of the act of 1925 provided that when compensation for the death of a father had been awarded under the workmen's compensation act allowances to the children should be withheld or reduced. Clause 13 of the present act repeals this provision, and allowances which are now being withheld or paid at a reduced rate will be paid at the full rate from January 2, 1930, provided the children concerned are still under the specified age—14, or, if still at school, 16.

Another provision in the new act provides that pensions shall continue to be paid in the case of certain insured persons who are inmates of insane asylums.

INDUSTRIAL AND LABOR CONDITIONS

Recent Activities of American Standards Association

ANNOUNCEMENT was recently made that the American Standards Association, with headquarters at 29 West Thirty-ninth Street, New York City, has become a member body of the International Standards Association, thus joining with the national standardizing bodies of 17 other countries, including Austria, Belgium, Czechoslovakia, Denmark, Finland, France, Germany, Holland, Hungary, Italy, Japan, Norway, Poland, Rumania, Russia, Sweden, and Switzerland. Only Great Britain, Canada, and Australia remain without representation.

The objects of the American Standards Association are "to provide systematic means of cooperation in establishing American standards to the end that duplication of work and the promulgation of conflicting standards may be avoided; to serve as a clearing house for information on standardization work in the United States and foreign countries; to act as the authoritative American channel in international cooperation in standardization work." Mr. Wm. J. Serrill, representing the American Gas Association, has been reelected president for 1930, and Mr. Cloyd M. Chapman, of the American Society of Mechanical Engineers, has been chosen vice president.

One important feature of the association's work during the year 1929 was the adoption of greater flexibility of procedure, providing four methods under which standards can be adopted. These methods according to report of the president to the annual meeting of the association held in New York December 18, are as follows:

- (1) Under an autonomous sectional committee.
- (2) Under the "existing standards method," i. e., approval of previously existing standards representing "a true consensus of competent industrial opinion with respect to its suitability for national adoption."
- (3) Under the new "proprietary standards method," approval of standards developed and sponsored by a body having an outstanding and controlling interest and importance in the field of the standard, if supported by a consensus of those substantially concerned with its development and use.
- (4) Under the "general acceptance method," especially applicable to "simple cases not requiring continued technical consideration. Under it, a conference of those principally concerned—producers, consumers, and other competent interest—is held. The decision of the conference is authenticated and supported by a sufficiently large number of written acceptances of the conference's recommendation, from those substantially concerned with the scope and provisions of the recommendations."

Private and Public Employment Agencies in California

APPROXIMATELY \$2,000,000 is paid per annum by California job seekers to private employment agencies, according to a report by the statistician of the Department of Industrial Relations of that State, published in the December, 1929, issue of the *American Labor Legislation Review*, from which the following data are taken: These fee-charging agencies sell approximately 500,000 temporary and permanent jobs per year. In the fiscal year 1927-28 there were 328 such agencies licensed by the State labor commissioner. In the middle of 1929 there were 306 of these agencies.

Fees

THE fees charged by private employment offices vary according to the character of the agency. Certain commercial agencies ask as much as 50 per cent of the first month's salary. Other bureaus have a system of sliding scales in which account is taken of the rapidity with which the total fee is paid. The prevailing charges of the various kinds of agencies are as follows: Agencies for commercial employees, 25 per cent of first month's salary; for teachers, 5 per cent of first year's salary; for hotel, domestic, and oriental help, 10 per cent of first month's salary; for general labor, skilled and unskilled, flat rates—from 25 cents for a day's job to \$10 for good permanent employment.

Statistics from 281 private employment agencies in California for 1928 showed that such agencies sold 450,100 jobs in that period and collected for them in fees the sum of \$1,772,000. Male applicants purchased 65 per cent of these jobs, and female applicants 35 per cent. The female job buyers, however, paid 40 per cent of the fees, as the majority of those making application for positions in mercantile establishments were women and the average fee for such positions was higher than the average fee for jobs for skilled and unskilled male labor. Taking all jobs sold by private employment agencies without regard to the duration of such jobs, the average fee charged per job in 1928 was \$3.93, while the average fee for commercial jobs of various durations was \$13.71.

The amounts of the fees to be charged by employment agencies in California are not fixed by law. In 1903 and also in 1923 the State passed legislation restricting the size of such fees. In both cases, however, the measures were declared unconstitutional by the California Supreme Court, employment agencies being considered competitive businesses and their applicants as customers. The State law does, however, require that the schedules for fees for different kinds of jobs be conspicuously posted on the premises of the agencies and that these schedules have the labor commissioner's approval before they are so posted. Furthermore, these schedules are not effective until 14 days after such approval, which means that the agencies are unable to increase fees suddenly when there are too many applicants for the same job.

Employment Agency Act

THE provision concerning the posting and approval of fee schedules is not the only safeguard offered to job seekers under the private employment agency law of California, which is enforced by the State

labor commissioner. Other protective features of this act are briefly indicated below:

1. All employment agents must be bonded before they can be licensed by the labor commissioner.
2. Jobs sold to applicants must be fully and adequately described on approved uniform receipts or contracts.
3. Registration fees, direct or indirect, are absolutely forbidden.
4. If a deposit is made, or fee paid, for a prospective job which the applicant does not get, the employment agency must return the deposit or fee within 48 hours; otherwise, it is liable to the applicant for double the amount of the deposit or fee.
5. Splitting fees between employment agents and employers' representatives is strictly prohibited.
6. When an employment agency sends an applicant to a job out of town, and the applicant does not secure the job, the employment agency must repay to the applicant the traveling and other expenses incurred by him.
7. Applicants sent to positions where strike conditions exist must be fully and plainly informed of such conditions in writing.
8. Employment agents are prohibited from placing minors in violation of the State child labor law.
9. Employment agencies must not be operated in connection with lodging houses, restaurants, or pool rooms.
10. Assignments of applicants' unearned wages, to insure the payment of the fee to the agency, are prohibited.
11. Regular reports must be made to the labor commissioner regarding the employment agencies' business, such as jobs furnished and fees collected.
12. All disputes regarding the terms of employment agency contracts must be submitted to the labor commissioner for adjudication.
13. The labor commissioner may revoke or suspend a license for violating the employment agency act, and without a license no one may operate a fee-charging employment agency.

In 1928 the labor commissioner received 664 complaints against licensed employment agencies.¹ Claims for refunds of fees constituted the great bulk of complaints. Upon receiving such a claim the deputy labor commissioner ordinarily endeavors to adjust the matter by telephoning the employment agency while the complainant is at the State labor bureau. When the facts in the case, however, seem to be involved, a hearing is arranged to which both the complainant and the employment agent are called. In 79.7 per cent of the 664 complaints the decision was in favor of the applicant and in 16.3 per cent in favor of the employment agency, while at the time the report was made 4 per cent of the cases had not been adjudicated. Sometimes a case can not be settled because the complainant drops the claim and disappears.

The demands for refunds which are submitted to the State bureau of labor statistics constitute only a small percentage of the total number of claims for refunds, the great majority being made directly to the employment agencies. In the biennium ending June 30, 1928, the California private employment agencies refunded 161,393 fees amounting to \$581,250. Moreover, during the same period the agencies paid to applicants who had been sent to a distance for jobs which they could not obtain, the sum of \$39,608 in reimbursement for travel and other expenses.

¹ The number of complaints of alleged violations of the private employment agency law exceed 1,000.

Public Employment Bureaus

THE division of employment agencies of the State department of industrial relations now operates 10 regular permanent free or public employment offices in the following cities: San Francisco, Los Angeles, Oakland, San Diego, San Jose, Fresno, Stockton, Sacramento, Bakersfield, and San Bernardino. Besides these permanent bureaus there are seasonal offices to assist farmers and farm laborers in the harvesting seasons. If the workers placed through these public agencies had to pay the fees demanded by private employment offices for similar jobs, the cost to such workers would approximate \$600,000 per annum.

Labor Shortage in Northern France

A REPORT from Harold Playter, American consul at Lille, France, dated November 15, 1929, states that the shortage of labor in the north of France, which has been more or less acute since the war, has increased in intensity during the past year.

The shortage has been felt in all branches of industry, including agriculture, but has been particularly acute in the iron and steel industries. In the textile industries, which have suffered from slack demand and low prices, the manufacturers would have been glad to curtail production for considerable periods but have been afraid to do so for fear of losing all hold upon their employees, as workers released even for short periods readily find employment elsewhere. In the iron and steel industries of the north and east of France, which have been exceedingly prosperous in the past two years, it is estimated that 50,000 more workers could be employed if they were available. The labor shortage in all branches of iron and steel or rolling-stock production includes both skilled and unskilled labor and even factory managers and shift bosses.

Foreign labor has always been employed in France, but especially since the war. The coal operators have long had a well-organized system for supplying themselves with this type of labor and at the present time there are approximately 20,000 Poles in the Departments of the Nord, Pas-de-Calais, and the Somme who are largely employed in the coal mines. In some mines of the Nord one-third of the labor is foreign.

The general immigration society located at Paris is active in bringing in workers, and Poles, Czechoslovaks, Yugoslavs, and Austrians are brought in on minimum contracts of three months after first being examined for physical condition and occupational fitness. The departmental employment offices cooperate with the society, but many of the smaller employers do not even know of the opportunities offered by those agencies, and the general lack of cooperation is shown by the practice of enticing men to leave one employment for another by offers of higher wages or other inducements. The condition is so acute that the societies are redoubling their efforts, and the trade journals are carrying long articles pointing out the needs and remedies and urging cooperation.

The causes of the labor shortage are found in the loss in man power due to the war, the increase in production capacity through the postwar reconstruction and the remodeling and enlarging of factories, and the marked prosperity of the metallurgical industries during the past two years. There has also been a considerable reduction in the supply of Belgian labor as a result of increased industrial activity in Belgium and the preparations in progress in that country for exhibitions which are drawing heavily upon the labor supply.

As an example of the shortage, figures of the local employment office for one small metallurgical region are given. During the first quarter of 1929 the office registered 2,309 offers of employment and 770 requests for employment; 694 workers were placed. The registered requests of employers for labor are said to be three or four times as great as in 1925 and 1926.

Although there is a sufficient supply of foreign labor available, one of the principal obstacles to the immigration of workers is the lack of housing accommodations. While some attempt is being made to provide workers' dwellings, the small employers can not afford an expensive building campaign and the efforts of the larger ones are still more or less scattered. Unified effort is lacking, also, on the part of public and private organizations. Some progress has been made, however, chiefly in the construction of metal houses, the most popular type of construction for workingmen's houses in this region. The cost of a 2-story house having five rooms is about 50,000 francs (\$1,950), while the cost of a multifamily dwelling, of which the usual size is 28 rooms divided into units for 12 families, is approximately 400,000 francs (\$15,600) or from 30,000 to 35,000 francs (\$1,170 to \$1,365) per family unit.

English Industrial Peace Conference

THE Labor Review for June, 1929, contained an account of the efforts made to secure united discussion of labor questions by a body representing the general council of the Trades-Union Congress and the two employers' organizations—the Federation of British Industries and the National Confederation of Employers' Organizations. It will be remembered that the two latter bodies rejected the proposals of the Mond-Turner conference for the establishment of a national industrial council, but expressed a willingness to meet the Trades-Union Congress for consultation and cooperation. A joint committee of the three bodies was formed to examine into the best methods for accomplishing this, and in December, 1929, the report drawn up by this committee, which had been meeting since last July, was considered and accepted at a conference of the two employers' organizations and the Trades-Union Congress.

The report, according to the Manchester Guardian for December 20, 1929, lays down the proposition that any one of the three bodies may propose as a subject for joint discussion any matter within its respective province. The two employers' associations are very cautious in regard to any infringement of their respective spheres of action, and are to set up an "allocation committee" to decide which one of them shall take up a specific subject proposed for discussion. This matter having once been settled, however, the discussion is to

be carried on between the parties directly concerned; it is recognized that some subjects may be within the spheres of both employers' organizations, and such are to be considered by all three bodies, while others are to be discussed by representatives of the Trades-Union Congress and the particular employers' association to which the allocation committee has assigned it.

If any one of the three bodies is unwilling to discuss a subject proposed, it is to explain the reasons for its refusal to the body proposing the subject. Unless otherwise mutually agreed, all discussions and correspondence arising out of the proposals are to be kept strictly confidential, and no action is to be taken on any conclusions reached until these conclusions have been specifically approved by the organizations concerned.

The following list was drawn up by the joint committee as typical of subjects suitable for discussion by the three bodies in conference:

1. Unemployment.
2. Industry and finance.
3. Taxation of industry: (a) General effect of taxation on industry; (b) inadequate allowances for obsolescence and depreciation, taxation of wasting assets, taxation of moneys put to reserve, and similar points.
4. Social services—coordination.
5. Education and industry.
6. Delegated powers of Government departments.
7. Inter-Empire trade.
8. International trade: (a) Tariff truce proposals; (b) proposals for multi-lateral customs agreements; (c) most-favored-nations treatment; (d) import and export restrictions convention, and similar problems.
9. Trade facilities.
10. Insurance of export credits.
11. General international labor questions.
12. Industrial and commercial statistics.

These proposals were approved by the general council of the Trades-Union Congress before the joint conference was held, and after acceptance at this conference required the approval of the councils of the two employers' organizations before they would become binding upon these bodies. Arrangements had been made for early meetings of these councils to pass upon the action of the conference.

WOMEN IN INDUSTRY

Laws Relating to Women Industrially Employed¹

Night-Work Laws for Women

SIXTEEN States² prohibit night work for women in certain industries or occupations. The laws of three of these States, Indiana, Massachusetts, and Pennsylvania, cover only manufacturing, and that of South Carolina covers only mercantile establishments. In both Ohio and Washington only one very small group is covered—i. e., ticket sellers in Ohio and elevator operators in Washington. In the remaining 10 States two or more industries or occupations are included. Maryland and New Hampshire limit the hours that a woman may work at night to 8, although on day work Maryland allows women to work 10 hours and New Hampshire 10¼ hours. The Porto Rican law prohibits night work in any lucrative occupations, with certain exceptions.

The most common period during which night work is prohibited is from 10 p. m. to 6 a. m. A few of the States set only an evening limit after which work is not permitted. The longest period of time during which night work is prohibited is from 6 p. m. to 6 a. m. in textile manufacturing in Massachusetts. Not only is night-work legislation found in a much smaller number of States than is legislation limiting the daily and weekly hours of work, but in many States that have both types of legislation the night-work laws cover a much smaller group of industries or occupations.

Legislation prohibiting night work of women and children for protection of their health and safety has been held constitutional.

Two cases were decided by the United States Supreme Court in 1885 upholding the power of the State and of cities to prohibit night work as a protection against fires; as the decisions rested on grounds of public safety, however, the cases were not strictly in the labor field. In the case of *Barbier v. Connolly* (113 U. S. 27, 31, 1885) the court in upholding the constitutionality of the ordinances said that neither the fourteenth amendment, "broad and comprehensive as it is, nor any other amendment, was designed to interfere with the power of the State, sometimes termed its police power, to prescribe regulations to promote the health, peace, morals, education, and good order of the people, and to legislate so as to increase the industries of the State, develop its resources, and add to its wealth and prosperity."

¹ With the exception of the discussion on the constitutionality of the legislation the information contained in this article is based upon U. S. Women's Bureau Buls. No. 63 and 66. For text of legislation see B. L. S. Bul. No. 370 and annual supplements. Similar articles in this field have appeared in the *Labor Review* in February, 1929 (pp. 62-75); May, 1929 (pp. 113-119); and November, 1929 (pp. 29-39).

² California, Connecticut, Delaware, Indiana, Kansas, Massachusetts, Nebraska, New Jersey (law contains no penalty provision and therefore is not effective), New York, North Dakota, Ohio, Oregon, Pennsylvania, South Carolina, Washington, and Wisconsin.

In the case of *Soon Hing v. Crowley* (113 U. S. 703, 709, 1885) the court disposed of an objection raised on the ground that the ordinance deprived a man of the right to work at all times on the ground that the objection was without force and that "however broad the right of every one to follow such calling and employ his time as he may judge most conducive to his interests, it must be exercised subject to such general rules as are adopted by society for the common welfare." The court pointed out several types of restrictions imposed upon the actions of men illustrating the point, including hours of labor. On this subject the court said: "How many hours shall constitute a day's work in the absence of contract, at what time shops in our cities shall close at night, are constant subjects of legislation. Laws setting aside Sunday as a day of rest are upheld. * * * Such laws have always been deemed beneficent and merciful laws, especially to the poor and dependent, to the laborers in our factories and workshops, and in the heated rooms of our cities, and their validity has been sustained by the highest courts of the States."

In 1924 a case directly in point went to the Supreme Court. The New York law prohibiting (in certain instances) females over the age of 16 years from being employed before 6 o'clock in the morning or after 10 o'clock in the evening of any day was upheld as constitutional. The court said that "the State legislature here determined that night employment of the character specified was sufficiently detrimental to the health and welfare of women engaging in it to justify its suppression, and since we are unable to say that the finding is clearly unfounded we are precluded from reviewing the legislative determination. The language used by this court in *Muller v. Oregon* (208 U. S. 412, 422) in respect of the physical limitations of women is applicable and controlling." (*Radice v. New York*, 264 U. S. 292, 294, 1924.)

LAWS GOVERNING NIGHT WORK FOR WOMAN WORKERS

State	Prohibition of night work	Limitation of night work	Occupations or industries specified	Citation
California-----	10 p. m. to 6 a. m.	-----	Laundry and dry-cleaning industry. Dried-fruit packing industry.	Industrial welfare commission orders, Nos. 7a and 8a, 1923.
	11 p. m. to 6 a. m.	In continuous processes where a permit to work at night is granted by industrial commission, time and one-half must be paid.	Manufacturing industry; nut cracking and sorting industry. <i>Exceptions:</i> In continuous processes, under permit from industrial commission.	Idem, Nos. 11a and 15a, 1923.
Connecticut-----	10 p. m. to 6 a. m.	-----	Public restaurant, café, dining room, barber shop, hair-dressing or manicuring establishment, photograph gallery, any manufacturing, mechanical, or mercantile establishment. <i>Exceptions:</i> Hotels. In event of war or other serious emergency, governor may suspend limitations where he deems it necessary.	Session Laws of Connecticut, 1925, ch. 208, pp. 3997-3998, and 1927, ch. 144, pp. 4230-4231.
	After 10 p. m.	-----	Any bowling alley, shoe-shining establishment, or billiard or pool room.	Idem, ch. 158, pp. 3933-3934.

LAWS GOVERNING NIGHT WORK FOR WOMAN WORKERS—Continued

State	Prohibition of night work	Limitation of night work	Occupations or industries specified	Citation
Delaware	10 p. m. to 6 a. m.		Mechanical or manufacturing establishment, laundry, baking, or printing establishment, office or dressmaking establishment. <i>Exceptions:</i> Canning or preserving, or preparation for canning or preserving of perishable fruits and vegetables.	Revised statutes of Delaware, 1915, sec. 3135, p. 1457, and Session Laws of Delaware, 1917, ch. 230, pp. 741-742.
		If any part of work is performed between 11 p. m. and 7 a. m. not more than 8 hours of work in any 24 are permitted.	Mercantile establishments, telephone and telegraph office or exchange, restaurant, hotel, place of amusement.	
Indiana	10 p. m. to 6 a. m.		Manufacturing	Burns's Annotated Indiana Statutes, 1926, Vol. III, sec. 9411, p. 21.
Kansas		Maximum hours shall not exceed 12 for total work time plus time for rest and sleep for all operators regularly employed after 10.30 p. m.	Telephone operators	Public service commission order, No. 5, Aug. 1, 1927.
	9 p. m. to 6 a. m.		Laundry occupation, i. e., laundries, dyeing, dry-cleaning, and pressing establishments.	Idem, No. 1, Aug. 1, 1927.
	do.		Manufacturing occupation, i. e., all processes in the production of commodities. Florists' shops and candy-making departments of confectionery stores and bakeries also are included. <i>Exceptions:</i> Millinery workrooms, dressmaking establishments, hemstitching and button shops, and alteration, drapery, and upholstery departments of a mercantile establishment may obtain permission from women's division of Public Service Commission to operate under the mercantile order.	Idem, No. 2, Aug. 1, 1927.
	After 9 p. m.		Mercantile establishments, i. e., establishments operated for purpose of trade in purchase or sale of any goods or merchandise. Includes sales force, wrapping employees, auditing and checking force, shippers in the mail-order department, receiving, marking, and stock-room employees, sheet-music saleswomen and demonstrators, and all employees in such establishments in any way directly connected with sale, purchase, and disposition of goods, wares and merchandise. <i>Exceptions:</i> Women's division of the Public Service Commission may permit mercantile establishments to remain open one day per week until 10 p. m. in agricultural communities, for any specified number of weeks between June 1 and Sept. 15.	Idem, No. 3, Aug. 1, 1927.
Maryland		If any part of work is performed before 6 a. m. or after 10 p. m., not more than 8 hours' work in any one day is permitted.	Manufacturing, mechanical, mercantile, printing, baking, or laundering establishment. <i>Exceptions:</i> Canning, preserving, or preparing for canning or preserving of perishable fruits and vegetables.	Bagby's Annotated Code of the Public General Laws of Maryland, 1924, Vol. II, art. 100, secs. 54-57, pp. 3104-3105.

LAWS GOVERNING NIGHT WORK FOR WOMAN WORKERS—Continued

State	Prohibition of night work	Limitation of night work	Occupations or industries specified	Citation
Massachusetts	10 p. m. to 6 a. m.		Manufacturing	General Laws of Massachusetts, 1921, Vol. II, ch. 149, sec. 59, p. 1565.
Nebraska	6 p. m. to 6 a. m. 10 p. m. to 6 a. m.		Manufacture of textile goods. Manufacturing, mechanical, or mercantile establishments, laundry, hotel, or restaurant, office in metropolitan cities and cities of the first class. <i>Exceptions:</i> Public service corporation.	Compiled Statutes of Nebraska, 1922, Civil Administrative Code, Title IV, Art. II, secs. 7659-7661, pp. 2360-2361.
New Hampshire		If any female works at any time between 8 p. m. and 6 a. m. on more than 2 nights per week, not more than 8 hours of work are permitted in any 24 hours, or more than 48 hours in any week.	Manual or mechanical labor in any employment. <i>Exceptions:</i> Household labor and nurses, domestic, hotel and boarding-house labor, operators in telephone and telegraph offices, and farm labor, manufacture of munitions and supplies for the United States or the State during war time, mercantile establishments on the 7 days preceding Christmas, provided annual weekly average does not exceed 54 hours.	Public Laws of New Hampshire, 1925, ch. 176, secs. 14-21, pp. 680-681.
New Jersey ¹	10 p. m. to 6 a. m.		Any manufacturing, mercantile establishment, any bakery, laundry, or restaurant. <i>Exceptions:</i> Canneries engaged in packing a perishable product, such as fruits or vegetables.	Session Laws of New Jersey, 1923, ch. 144, pp. 312-313.
New York	do		Factory, i. e., mill, workshop, or other manufacturing establishment, laundries.	Session Laws of New York, 1927, ch. 453, pp. 1133-1135.
	10 p. m. to 7 a. m.		Mercantile establishment. <i>Exceptions:</i> Dec. 18-24, writers or reporters in newspaper offices, duly licensed pharmacists.	Session Laws, 1928 ch. 567.
	10 p. m. to 6 a. m.		Work in or in connection with restaurants in cities of first and second class. <i>Exceptions:</i> Singers and performers of any kind, attendants in ladies' cloak rooms and parlors, employees in or in connection with dining rooms and kitchens of hotels or in connection with employees' lunch rooms or restaurants.	Cahill's Consolidated Laws of New York, 1923, ch. 32, sec. 182, p. 1198.
	10 p. m. to 7 a. m.		Custody, management of, or operation of elevator for freight or passengers in any building or place. <i>Exceptions:</i> If industry occupying the building starts work at 6 a. m., elevator operator may begin work at that hour. Women over 21 years in hotels.	Idem, sec. 183, p. 1198.
	10 p. m. to 6 a. m.		Conductor or guard on any street surface, electric, subway or elevated railroad.	Idem, sec. 184, p. 1198.
	10 p. m. to 7 a. m.		Messenger for a telegraph or messenger company in the distribution, transmission, or delivery of goods or messages.	Idem, sec. 185, p. 1198.

¹ Law contains no enforcement provisions and therefore is without effect.

LAWS GOVERNING NIGHT WORK FOR WOMAN WORKERS—Continued

State	Prohibition of night work	Limitation of night work	Occupations or Industries specified	Citation
North Dakota	1 a. m. to 5 a. m.	-----	Public housekeeping occupation, i. e., work of waitresses in restaurants, hotel dining rooms, boarding houses, and all attendants employed at ice-cream and light-lunch stands and steam-table or counter work in cafeterias and delicatessens where freshly cooked foods are served; work of chambermaids in hotels and lodging houses and boarding houses and hospitals; and work of janitresses and car cleaners and of kitchen workers in hotels and restaurants and hospitals.	Minimum wage department order, No. 1, 1922.
	11 p. m. to 7 a. m. After 9 p. m.	-----	Elevator operators. Mercantile establishment, i. e., establishments operated for purpose of trade in purchase or sale of any goods or merchandise. Includes sales force, wrapping force, auditing or checking force, shippers in mail-order department, receiving, marking, and stock-room employees, and sheet-music saleswomen and demonstrators and cigar-stand girls.	Idem, No. 3, 1922.
Ohio	10 p. m. to 6 a. m.	-----	Ticket sellers.	Page's General Code of Ohio 1926, Vol. 1, sec. 1008-1, p. 413.
Oregon	After 6 p. m.	-----	Mercantile occupations in Portland, i. e., in establishments operated for purpose of trade in purchase or sale of any goods or merchandise. Includes sales force, wrapping employees, auditing or check inspection force, shippers in mail-order department, receiving, marking, and stock-room employees, and music saleswomen and demonstrators. <i>Exceptions:</i> Cigar stands in hotels; confectionery stores.	Industrial welfare commission order No. 37, 1919.
	After 8.30 p. m.	-----	Mercantile occupations outside of Portland, i. e., in establishments operated for purpose of trade in purchase or sale of any goods or merchandise. Includes sales force, wrapping employees, auditing or check inspection force, shippers in mail-order department, receiving, marking, and stock-room employees, and sheet-music saleswomen and demonstrators. <i>Exceptions:</i> Cigar stands in hotels; confectionery stores.	Idem, No. 38, 1919.
	do	-----	Manufacturing occupation, i. e., all processes in the production of commodities. Includes work performed in dressmaking shops and wholesale millinery houses, in the workrooms of retail millinery shops, and in drapery and furniture-covering workrooms, garment alteration, art needle work, fur-garment making, and millinery workrooms in mercantile stores, and candy-making department of retail candy stores, and of restaurants. <i>Exceptions:</i> Fruit and vegetable drying, canning, preserving, and packing establishments. Laundry occupation, i. e., all the processes connected with receiving, marking, washing, cleaning, and ironing and distributing of washable and cleanable materials, and work performed in laundry departments in hotels and factories.	Idem, Nos. 39 and 41, 1919.

LAWS GOVERNING NIGHT WORK FOR WOMAN WORKERS—Continued

State	Prohibition of night work	Limitation of night work	Occupations or industries specified	Citation
Oregon.....	11 p. m. to 7 a. m.		Elevator operators.....	Idem, No. 45, 1919.
Pennsylvania..	10 p. m. to 6 a. m.		Manufacturing establishment. <i>Exceptions:</i> Managers, superintendents, or persons doing clerical or stenographic work.	Digest of Pennsylvania Statute. Law, 1920, secs. 13540, 13541, and 13543, p. 1331.
Porto Rico.....	do.....		Any lucrative occupation. <i>Exceptions:</i> Telephone operators or telegraphers, artists, nurses or domestics, over 16 years of age.	Session Laws of Porto Rico, 2d sess., 1919, No. 73.
South Carolina.	After 10 p. m.		Mercantile establishments.....	Code of Laws of South Carolina, 1922, Vol. II, Criminal Code, ch. 7, sec 35, p. 137.
Washington....	After 12 mid-night.		Elevator operators.....	Industrial welfare committee order, No. 23, 1921.
Wisconsin ¹	6 p. m. to 6 a. m.		Manufactories and laundries. <i>Exceptions:</i> Pea canneries.	Industrial commission order, No. 1, 1917.
		Work performed between 6.30 p. m. and 6 a. m. must be limited to 8 hours per night, 48 hours per week.	Mechanical or mercantile establishments, confectionery store, telegraph or telephone, express or transportation. <i>Exceptions:</i> Work may be done on one night per week without bringing establishment under this ruling.	Idem, Nos. 2 and 3, 1917, amended Sept. 1, 1923.
		If any woman works at any time between 8 p. m. and 6 a. m. on more than one night per week, not more than 8 hours of work in any one night or 48 in any one week are permitted.	Place of employment, i. e., manufacturing, mechanical, or mercantile establishment, laundry, restaurant, confectionery store, or telegraph or telephone office or exchange, or any express or transportation establishment.	Wisconsin Statutes, 1925, secs. 103.01-103.02, pp. 1134-1135.
	8 p. m. to 6 a. m.		Restaurants.....	Industrial commission orders, Nos. 2 and 3, amended Sept. 1, 1923.
		If any woman works at any time between 9 p. m. and 6 a. m., not more than 9 hours of work in any one night or 54 in any one week are permitted.	Hotels.....	Wisconsin Statutes, 1925, sec. 103.02, pp. 1134-1135.

¹ Wisconsin has an industrial commission order prohibiting night work for women on street railways, but few, if any, women are employed in such a capacity in Wisconsin.

Laws Containing Rest Provisions for Woman Workers

EIGHTEEN States, the District of Columbia, and Porto Rico have regulated the hours of working women by providing for breaks in their hours of employment. These laws supplement the legislation on the length of the working day and week. Thus, 13 jurisdictions³ have limited the number of days that a woman may work in succession, the limitation in the majority of cases being six days out of

³ Arizona, Arkansas, California, Delaware, Kansas, New Jersey, New York, North Dakota, Ohio, Oregon, Pennsylvania, Washington, and the District of Columbia.

seven. Oregon requires the telephone industry to provide one shorter workday in each two weeks, in addition to the day of rest.

Thirteen States ⁴ and Porto Rico have provided that a period of time varying from 30 minutes to 1 hour must be allowed for the noonday meal.

Twelve States, ⁵ the District of Columbia, and Porto Rico have ruled that a woman may work only a fixed number of hours, usually five or six, without either a meal period or a rest period of some sort.

A great many of the States having laws limiting the total number of hours that a woman may work per day or per week have not provided for any breaks in her employment. Hours of labor have been limited in 43 States but only 18 States have provided that women must have a day of rest, or one shorter workday, or time for meals, or rest periods.

In the States that have industrial commissions the orders for rest periods, a day of rest, and time for meals have generally been issued for specific industries or occupations and have taken into consideration the special conditions applying to each case. For example, Oregon considers the work in the telephone industry in the city of Portland apart from that in the rest of the State and provides for 1 day of rest in 7 in Portland, but only for 1 day of rest and 1 short day of 6 hours in every 14 days for the State at large. In California, Oregon, and Washington the orders issued by the industrial welfare commission provide the only form of regulation covering rest periods, time for meals, or one day's rest in seven, although daily and weekly hours are fixed by acts of the legislature.

⁴ Arkansas, California, Delaware, Kansas, Louisiana, Massachusetts, Minnesota, New York, North Dakota, Ohio, Pennsylvania, Washington, and Wisconsin.

⁵ Arkansas, Delaware, Kansas, Louisiana, Maine, Maryland, Massachusetts, North Dakota, Oregon, Pennsylvania, Washington, and Wisconsin.

WOMEN IN INDUSTRY

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State	Day of rest or 1 shorter workday	Time for meals	Rest periods	Occupations or industries specified	Citation
Arizona	Every employer shall provide for 1 full day of rest a week for every female.			Any manufacturing or mercantile establishment, confectionery, store, bakery, laundry, place of amusement, hotel, restaurant, telephone or telegraph office or exchange, or other establishment. <i>Exceptions:</i> Telephone or telegraph office or exchange employing 3 or less women; nurses; adult women employed 6 hours or less per day.	Session Laws of Arizona, 1927, ch. 44, pp. 106-107.
Arkansas	No female shall be employed more than 6 days in any one week.	Not be less than three-quarters of an hour at noon.	Not permitted to work more than 6 hours continuously without interval of at least three-quarters of an hour. <i>Exceptions:</i> 6½ hours' continuous labor if employment ends not later than 1.30 p. m. and worker is dismissed for remainder of day.	Manufacturing, mechanical, or mercantile establishment, laundry, or any express or transportation company. <i>Exceptions:</i> Cotton factories, gathering of fruits or farm products.	Crawford & Moses' Digest of Statutes of Arkansas, 1919, ch. 117, secs. 7102-7107, pp. 1856-1857.
	.do.			Hotels and restaurants	Industrial welfare commission order, "Regulating employment of females in hotels and restaurants," 1919.
California	No person, firm, or corporation shall employ or suffer or permit any woman to work more than 6 days in any one week.	1 hour, either at noon or at evening, but may not return to work at noon in less than one-half hour.		Laundry and dry cleaning and manufacturing industries.	Industrial welfare commission order, No. 4, 1919.
	.do.	Three-quarters of an hour at noontime, but may not return to work in less than one-half hour. 1 hour if work continues after 7.30 p. m., but may not return to work in less than one-half hour.		Mercantile establishments.	Idem, No. 13, 1920.
	.do.			Labeling in fruit and vegetable canning industry; mercantile industry; labeling and office work in fish-canning industry; laundry and dry-cleaning industry; dried-fruit packing industry and office workers in the citrus-packing and green fruit and vegetable packing industry; manufacturing industry; nut cracking and sorting industry.	Idem, Nos. 3a, amended June 4, 1928, 5a, 6a, 7a, 8a, 11a, 15a, 1923.

LAWS PROVIDING FOR A DAY OF REST, ONE SHORTER WORKDAY, TIME FOR MEALS, AND REST PERIODS FOR WOMAN WORKERS—Continued

State	Day of rest or 1 shorter workday	Time for meals	Rest periods	Occupations or industries specified	Citation
California	Every woman and minor shall be entitled to 1 day's rest in 7. <i>Exceptions:</i> Emergencies, in which case work may go on if time and a quarter is paid for the first 8 hours and double time thereafter. Every employer employing women shall provide for 1 full day of rest a week. <i>Exceptions:</i> Women working 6 hours per day may work 7 days per week. No female shall be employed more than 6 days in any one calendar week.	----- Not less than 30 minutes for midday or evening meal. -----	----- Not permitted to work more than 6 hours continuously without interval of at least three-quarters of an hour. <i>Exceptions:</i> 6½ hours' continuous labor if employment ends not later than 1.30 p. m. and worker is dismissed for remainder of day. ----- Not permitted to work more than 6 hours continuously without interval of at least three-quarters of an hour. <i>Exceptions:</i> (1) 6½ hours' continuous labor if employment ends not later than 1.30 p. m. and worker is dismissed for remainder of day. (2) Establishments or occupations in which less than 3 females are employed.	General and professional offices; fruit and vegetable canning industry; fish-canning industry; citrus packing and green fruit and vegetable packing industry. Unclassified occupations; hotels and restaurants.	Idem, No. 9, 1920, and Nos. 3a, 6a, 8a, 1923. Idem, Nos. 10a, 12a, 1923.
Delaware	No female shall be employed more than 6 days in any one calendar week.	-----	-----	Mercantile, mechanical, or manufacturing establishment; laundry, baking, or printing establishment; telephone and telegraph office or exchange; restaurant, hotel, place of amusement, dressmaking establishment, or office. <i>Exceptions:</i> Canning or preserving or preparation for canning or preserving of perishable fruits and vegetables. Manufacturing, mechanical, or mercantile establishments, laundry, hotel, or restaurant, or telegraph or telephone establishment or office, or any express or transportation company.	Session Laws of Delaware, 1917, ch. 230, pp. 741-742. District of Columbia Code, 1924, p. 613.

Kansas	6 days shall constitute a basic week for all women and minors.	1 hour for lunch, but women's division of public service commission, on application of both employer and employee, may reduce period to one-half hour. Not less than 45 minutes. <i>Exceptions:</i> Public service commission may grant shorter period in any particular industry; where industry operates on an 8-hour basis, lunch period shall not be less than 30 minutes.	Day's work divided into two shifts, one of which shall not exceed 5 hours.	Telephone operators. Laundry occupation, i. e., laundries, dyeing, dry-cleaning, and pressing establishments. Manufacturing occupation, i. e., all processes in the production of commodities. Florists' shops and candy-making departments of confectionery stores and bakeries also included. <i>Exceptions:</i> Millinery workrooms, dressmaking establishments, hemstitching and button shops, and alteration, drapery, and upholstery departments of a mercantile establishment may obtain permission from the court of industrial relations to operate under mercantile order.	Public service commission order, No. 5, Aug. 1, 1927. Idem, No. 1, Aug. 1, 1927. Idem, No. 2, Aug. 1, 1927. Idem, No. 3, Aug. 1, 1927. Idem, No. 4, Aug. 1, 1927.
	Employment for women and minors shall be limited to 6 days in a week, with 1 day of rest in every 7 days.	1 hour, but women's division of public service commission, on application showing that both employer and employee prefer a shorter period, may reduce period to not less than 45 minutes.	Not permitted to work more than 6 hours continuously without interval for meals. Not permitted to work more than 5 hours continuously without interval for meals. Not permitted to work more than 5 hours without interval for meals.	Public housekeeping occupation, i. e., work of waitresses in restaurants, hotel dining rooms, and boarding houses; all attendants employed at ice-cream parlors, soda fountains, light-lunch stands, steam-table or counter work in cafeterias and delicatessens where freshly cooked foods are served, and confectionery stores where lunches are served; work of chambermaids in hotels, lodging and boarding houses, and hospitals; work of janitresses, of car cleaners, and of kitchen workers in hotels, restaurants and hospitals; elevator operators, cigar-stand and cashier girls connected with such establishments. All persons, firms, or corporations doing business at retail.	
Louisiana		Not less than 30 minutes for lunch or recreation each day, between the hours of 10 a. m. and 3 p. m.	See "Time for meals"		Wolf's Constitution, and Statutes of Louisiana, 1920. Vol. II, p. 1090.

LAWS PROVIDING FOR A DAY OF REST, ONE SHORTER WORKDAY, TIME FOR MEALS, AND REST PERIODS FOR WOMAN WORKERS—Continued

State	Day of rest or 1 shorter workday	Time for meals	Rest periods	Occupations or industries specified	Citation
Louisiana		1 hour for dinner. <i>Exceptions:</i> In case two-thirds of employees so desire, 30 minutes only may be allowed.		Mill, factory, mine, packing house, manufacturing establishment, workshop, laundry, millinery or dressmaking stores, or mercantile establishments, or hotels or restaurants, or in any theater or concert hall or in or about any place of amusement where intoxicating liquors are made or sold or in any bowling alley, boot-black establishment, freight or passenger elevator, or in the transmission or distribution of messages, whether telegraph or telephone or any other messages, or merchandise, or in any other occupation whatsoever. <i>Exceptions:</i> Stores or mercantile establishments in which not more than 5 persons are employed on Saturday nights.	Idem, pp. 1082 and 1084.
Maine			Not permitted to work more than 6 hours continuously without interval of at least 1 hour. <i>Exceptions:</i> 6½ hours' continuous labor if employment ends not later than 1.30 p. m. and worker is dismissed for remainder of day.	Workshop, factory, manufacturing, or mechanical establishment or laundry, telephone exchange employing more than 3 operators, or mercantile establishment, store, restaurant, telegraph office, or any express or transportation company. <i>Exceptions:</i> Public services in cases of emergency, or in cases of extraordinary public requirement, manufacturing establishment, or business the materials and products of which are perishable.	Revised Statutes of Maine, 6th ed., 1916, pp. 1650-1652.
Maryland			Not permitted to work more than 6 hours continuously without interval of at least a half hour. <i>Exceptions:</i> 6½ hours' continuous labor if worker is dismissed for remainder of day. At least 2 rest intervals of not less than 1 hour each.	Manufacturing, mechanical, mercantile, printing, baking, or laundering establishments. <i>Exceptions:</i> Establishments employing less than 5 persons; canning, preserving, or preparing for canning or preserving of perishable fruits and vegetables.	Bagby's Annotated Code of the Public General Laws of Maryland, 1924, Vol. II, Art. 100, secs. 54-57, pp. 3104-3105.
Massachusetts		Not permitted to work more than 6 hours continuously without interval of at least 45 minutes for a meal. <i>Exceptions:</i> 6½ hours' continuous labor if employment ends not later than 1 p. m. and worker is dismissed for remainder of day; 7½ hours if worker is allowed sufficient opportunity	See "Time for meals" -----	Mercantile establishments outside of the city of Baltimore where work is permitted for 12 hours on Saturdays, Christmas Eve, and the 5 days preceding Christmas Eve. Factory or workshop in which 5 or more women or persons under 18 years of age are employed. <i>Exceptions:</i> Ironworks, glass works, paper mills, letter-press establishments, print works, bleaching works, or dyeing works, or continuous processes exempted by department of labor and industries with the approval of the governor.	General laws of Massachusetts, 1921, Vol. II, ch. 149, secs. 100-101, p. 1578.

Minnesota	to eat a lunch, and if employment ends not later than 2 p.m. and worker is dismissed for remainder of day. At least 60 minutes at noon. <i>Exceptions:</i> Commissioner of labor may issue permits allowing a shorter time. At least 20 minutes when employees work more than 1 hour overtime after 6 p. m. do.		Mercantile establishment, restaurant, lunch room, or eating house, or kitchen operated in connection therewith; mechanical or manufacturing establishment; telephone or telegraph establishment in cities of the first and second class. Factory, workshop, store, or mill	General Statutes of Minnesota, 1913, sec. 3861, p. 879, Session Laws, 1923, ch. 422. Labor Laws of Minnesota, 1919, Laws, 1909, ch. 499, p. 101 (issued by the department of labor and industries, St. Paul, Minn.). First Supplement to the Compiled Statutes of New Jersey, 1911-1915, sec. 83, p. 866. Session Laws of New York, 1927, ch. 453, (a) sec. 172, pp. 1133-1134, (b) sec. 181, pp. 1134-1135; and Cahill's Consolidated Laws of New York, 1923, ch. 32, (c) sec. 182, p. 1198, (d) sec. 183, p. 1198, (e) sec. 185, p. 1198, amended by acts of 1928, ch. 567. Cahill's Consolidated Laws of New York, 1923, ch. 32, sec. 184, p. 1198.
New Jersey	No female shall be employed, allowed, or permitted to work more than 6 days in any one week.		Manufacturing or mercantile establishment; bakery, laundry, restaurant. <i>Exceptions:</i> Canneries engaged in packing a perishable product, such as fruits or vegetables; hotels or other continuous business where working hours do not exceed 8 per day.	
New York	No female shall be employed more than 6 days in any week.		(a) Factory, i. e., mill, workshop, manufacturing establishment, laundries. (b) Mercantile establishment. <i>Exceptions:</i> Writers or reporters in newspaper offices. (c) Work in or in connection with restaurants in cities of the first and second class. <i>Exceptions:</i> Singers and performers of any kind, attendants in ladies' cloak rooms and parlors; employees in or in connection with the dining rooms and kitchens of hotels or in connection with employees' lunch rooms or restaurants. (d) Custody or management of or operation of any elevator for freight or passengers in any building or place. <i>Exceptions:</i> Hotels. (e) Messenger for a telegraph or messenger company in the distribution, transmission or delivery of goods or messages, duly licensed pharmacists. Conductor or guard on any street, surface, electric, subway, or elevated railroad.	
	do.	Not less than 1 hour shall be allowed for meals. <i>Exceptions:</i> Commissioner of Labor may grant permission for a shorter period.		

LAWS PROVIDING FOR A DAY OF REST, ONE SHORTER WORKDAY, TIME FOR MEALS, AND REST PERIODS FOR WOMAN WORKERS—Continued

State	Day of rest or 1 shorter workday	Time for meals	Rest periods	Occupations or industries specified	Citation
North Dakota	No female shall be employed more than 6 days in any week.	30 minutes if meals are furnished on premises; 60 minutes if employees must leave premises.	Not permitted to work more than 4 hours continuously without rest period.	Manufacturing, mechanical, or mercantile establishment, laundry, hotel, or restaurant, or telephone or telegraph establishment or office, or any express or transportation company. <i>Exceptions:</i> Rural telephone exchanges and in villages and towns of less than 500 population. Public housekeeping occupation, i. e., the work of waitresses in restaurants, hotel dining rooms, boarding houses, and all attendants employed at ice cream and light-lunch stands, and steam table or counter work in cafeterias and delicatessens where freshly cooked foods are served and the work of chambermaids in hotels and lodging houses and boarding houses and hospitals, and the work of janitresses and cleaners and of kitchen workers in hotels and restaurants and hospital and elevator operators. Manufacturing occupation, i. e., all processes in the production of commodities. Includes work performed in dressmaking shops and wholesale millinery houses, in workrooms of retail millinery shops, and in drapery and furniture-covering workshops, garment alteration, art, needlework, fur-garment making, and millinery workrooms in mercantile stores, and candy-making departments of retail candy stores and of restaurants, and in bakery and biscuit manufacturing establishments, in candy manufacturing and in book-binding and job press feeding. Laundry occupation, i. e., all processes connected with receiving, marking, washing, cleaning, ironing, and distribution of washable or cleanable materials. Work performed in laundry departments in hotels, hospitals and factories. Telephone exchanges.	Session Laws of North Dakota, 1927, ch. 142, pp. 186-187. Minimum wage department order, No. 1, 1922. Idem, No. 2, 1922. Idem, No. 4, 1922. Idem, No. 5, 1922.
Ohio		Adequate time and provision at seasonable hours. At least 30 minutes in establishments with lunch rooms, and at least 1 hour in establishments without lunch rooms.	Not permitted to work more than 5 hours continuously without rest period.	Factory, workshop, business office, telephone or telegraph office, restaurant, bakery, millinery or dressmaking establishment, mercantile, or other establishment.	Page's General Code of Ohio, 1926, Vol. I, sec. 1008, p. 12.

No female shall be employed, permitted, or suffered to work more than 6 days in any one week.		Factory, workshop, telephone or telegraph office, millinery or dressmaking establishment, restaurant; distribution or transmission of messages, in or on any interurban or street-railway car, or as ticket sellers or elevator operators, or in any mercantile establishment located in any city. <i>Exceptions:</i> Canneries and establishments preparing for use perishable goods during canning season. All occupations	Idem.
No person shall employ any woman * for more than 6 days in one calendar week.	Not permitted to work on two successive days without interval of 9 hours' rest between such days. Not permitted to work more than 6 hours continuously without interval of at least 45 minutes.	Mercantile occupations, i. e., in establishments operated for the purpose of trade in the purchase or sale of any goods or merchandise. Includes sales force, wrapping employees, auditing or check inspection force, shippers in mail-order department, receiving, marking and stock-room employees, and sheet-music saleswomen and demonstrators. Manufacturing occupations, i. e., all processes in production of commodities. Includes work performed in dressmaking shops, and wholesale millinery houses, in workrooms of retail millinery shops, and in drapery and furniture-covering workrooms, garment alteration, art needlework, fur-garment making and millinery workrooms in mercantile stores, and candy-making department of retail candy stores, and of restaurants. <i>Exceptions:</i> Fruit and vegetable drying, canning, preserving, and packing establishments. Laundry occupations, i. e., all processes connected with receiving, marking, washing, cleaning and ironing and distribution of washable and cleanable materials. Work performed in laundry departments in hotels and factories. Personal-service occupation, i. e., manicuring, hairdressing, barbering, and other work of like nature and work of ushers in theaters. Office occupations, i. e., stenographers, bookkeepers, typists, billing clerks, filing clerks, cashiers, checkers, invoicers, comptometer operators, auditors, attendants in physicians' and dentists' offices, and all kinds of clerical work. Telephone or telegraph occupations, public housekeeping occupation, i. e., hotel, restaurant, boarding house, car cleaners, janitresses, elevator operators.	Industrial welfare commission order, No. 36, 1918. Idem, Nos. 37, 38, 39, and 41, 1919.
do	Not permitted to work more than 6 hours continuously between 7 a. m. and 8.30 p. m., without interval of at least 45 minutes. do		Idem, Nos. 40 and 44, 1919.
	do		Idem, Nos. 42, 43, and 45, 1919.

LAWS PROVIDING FOR A DAY OF REST, ONE SHORTER WORKDAY, TIME FOR MEALS, AND REST PERIODS FOR WOMAN WORKERS—Continued

State	Day of rest or 1 shorter workday	Time for meals	Rest periods	Occupations or industries specified	Citation
Oregon	No person shall employ any woman * * * for 7 consecutive days without allowing 1 day during which the hours of employment do not exceed 6. No person shall employ any woman * * * for more than 6 days in one calendar week. Commission may except exchanging employment less than 10 operators. No person shall employ any woman for 14 consecutive days without 1 full day of rest. No person shall employ any woman * * * for 14 consecutive days without 1 day of not more than 6 hours' work. Commission may except exchanges employing less than 10 operators. No female shall be employed or permitted to work for more than 6 days in any one week.			Telegraph occupations	Idem, Nos. 42 and 43, 1919.
				Telephone occupations in the city of Portland	Idem, No. 42, 1919.
				Telephone occupations outside Portland	Idem, No. 43, 1919.
Pennsylvania		Not less than 45 minutes at noon. <i>Exceptions:</i> If work less than 8 hours per day, noon meal time may be reduced to not less than 30 minutes.	Not permitted to work more than 6 hours continuously without interval of at least 45 minutes. If work less than 8 hours per day, interval between work periods may be reduced to not less than 30 minutes.	Any establishment, i. e., "any place within the Commonwealth where work is done for compensation of any sort to whomever payable." <i>Exceptions:</i> Nurses in hospitals, work in private homes, farming, canning of fruit and vegetable products.	Digest of Pennsylvania Statute Law, 1920, Secs. 13-40, 13-54, 13-54 2, 13-54 3, 13-54 4, 13-54 5, 13-54 6, p. 1331.

<p>The 1 day of holiday in 7 may be subdivided into 2 days of 12 hours each at the discretion of the industrial board.</p>		<p>Hotels, boarding houses, charitable, educational, and religious institutions.</p>	
<p>Woman employees may be granted 1 whole day of rest or (provided daily hours do not exceed 8) 2 half days in each calendar week.</p>		<p>Short-term summer hotels operating 4 months per year.</p>	<p>[Industrial board, Rule W-3, December, 1928.</p>
<p>Woman employees may be granted 1 day of rest per week by any of following methods: (1) 1 complete day; (2) 24 hours' consecutive rest beginning at any hour of the day; (3) Sunday off one week, a week day off next week; (4) alternate Sunday's off with one-half week day. Equals 2 full days per fortnight; (5) 2 half holidays of at least 5 hours each (only in case daily hours do not exceed 8.)</p>		<p>Hotels and institutions employing not more than 10 women.</p>	<p>Idem, Rule W-1, December, 1926</p>
<p>Woman employees shall be given 1 complete day off in each calendar week, or 24 hours of consecutive rest beginning at any hour of day.</p>		<p>Hotels employing more than 10 women.....</p>	

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LAWS PROVIDING FOR A DAY OF REST, ONE SHORTER WORKDAY, TIME FOR MEALS, AND REST PERIODS FOR WOMAN WORKERS—Continued

State	Day of rest or 1 shorter workday	Time for meals	Rest periods	Occupations or industries specified	Citation
Porto Rico		Not less than 1 hour	Not permitted to work more than 4 hours in each period.	Any lucrative occupation.	Session Laws of Porto Rico, 21 sess., 1919, No. 73, pp. 496-497.
Washington	No female shall be employed more than 6 days in any one week. <i>Exceptions:</i> Emergencies, when women may be employed 10 days before a day of rest is given them, provided they receive at least 4 days' rest in any 28-day period. Minimum wage is set for a 6-day week. do. do.		Not permitted to work more than 5 hours without interval of at least one-half hour.	Public housekeeping industry, i. e., linen-room girls, chambermaids, cleaners, kitchen girls, dishwashers, pantry girls, pantry servers, waitresses, counter girls, bus girls, elevator operators, janitresses, laundry workers (except when a commercial laundry is operated), and any other occupation properly classified under this industry. Includes hotels, rooming houses, boarding houses, restaurants, cafés, cafeterias, lunch rooms, tea rooms, apartment houses, hospitals (not nurses), philanthropic institutions, and any other which may be properly classified here.	Industrial welfare committee order, No. 23, 1921.
		Not less than 1 hour	Not permitted to work on shift of more than 6 hours without interval of 15 minutes.	Laundry, dry-cleaning or dye-works occupation, trade or industry.	Idem, No. 25, 1921.
		Not less than 1 hour		Telephone or telegraph lines or any other public occupation. <i>Exceptions:</i> Occupations regulated by orders numbered 23, 25, 28 and 29. Mercantile establishment.	Idem, No. 27, 1921.
		Not less than 1 hour at noon		Manufacturing occupations, trades, and industries.	Idem, No. 28, 1921.
Wisconsin	No female shall be employed for more than 6 days in any one week.	Not less than 1 hour during day or night. <i>Exceptions:</i> Commission may modify this provision. 45 minutes		Place of employment (i. e., manufacturing, mechanical, or mercantile establishment; laundry, restaurant, confectionery store, or telegraph or telephone office or exchange, or any express or transportation establishment). In cities of the first class, factories which have convenient, adequately equipped lunch rooms.	Wisconsin Statutes, 1925, Vol. I, secs. 103.01-103.02, pp. 1134-1135.
		30 minutes provided stretch of labor between meals does not exceed 5 hours. Not less than 30 minutes at or about noon, 6 p. m., and midnight.		In restaurants where employees eat on premises.	Industrial commission order No. 5, 1918. Idem.
			Stretch of work between meal periods may never exceed 6 hours. There must be a rest period of at least 9 consecutive hours during each 24.	Factories canning peas, beans, cherries, corn, or tomatoes.	Industrial commission orders regulating canneries specified

Prohibitory and Regulatory Laws Relating to the Employment of Women

A LIMITED number of employments are prohibited to women by legislation. Most of these provisions are found only in the laws of a few States, and many employments are prohibited or regulated in not more than one State. Many of the States have only a single prohibition or regulation.

Twenty States⁶ and the District of Columbia have no legislation regulating the conditions under which women may work at any specific occupation or excluding them from employment at any occupation in any industry. One of these States, Kansas, has a blanket law declaring it unlawful to employ women under conditions detrimental to their health or welfare, but no employment is named in the act and none has been specified by any authorized body of the State.

The legislation of 14 States contains only a single prohibition or regulation. The laws of 8 of these—Alabama, Arkansas, Illinois, Indiana, Maryland, Virginia, West Virginia, and Wyoming—prohibit only work in mines; those of North Dakota and Oregon prohibit messenger service; those of Connecticut and Vermont require specified unemployed periods for woman workers before and after childbirth; that of Louisiana forbids the cleaning of moving machinery; and that of California prohibits the lifting or carrying of heavy weights. Michigan might also be included in this list. Since one of its two enactments (relating to work on moving abrasives) has never been enforced, because of ambiguous wording, and is considered a dead letter. Its only active law prohibits the cleaning of moving machinery.

Incidence of Prohibitory or Regulatory Provisions

PROHIBITIONS or regulations occurring in only one State are 22 in number. The law of Colorado prohibits work in coke ovens; that of Ohio, work as crossing watchman, express driver, molder, taxi driver,⁷ jitney driver, freight or baggage elevator operator, and baggage or freight handler, and work in blast furnaces, shoe-shining parlors, bowling alleys, and pool rooms, and in delivery service; and that of Pennsylvania, acetylene and electric welding or burning, handling nitrators in the manufacture of nitroglycerine, taking down blue beds after the process of lead corroding and setting up blue beds in the corroding stacks of the Old Dutch process (unless buckles or lead plates are used which have not previously been corroded), operating cranes, and work for railroad corporations as messengers calling train crews. The Minnesota law prohibits the oiling of moving machinery and that of Missouri specifies that no woman shall work between the traversing or the fixed and traversing parts of any machine moved by any mechanical power except the machine she is operating. In New York, employment in the basements of mercantile stores and restaurants may be allowed by the commissioner of labor only if the basements are sufficiently lighted, ventilated, and sanitary.

⁶ Delaware, Florida, Georgia, Idaho, Iowa, Kansas, Kentucky, Maine, Mississippi, Montana, Nebraska, Nevada, New Hampshire, New Mexico, North Carolina, Rhode Island, South Carolina, South Dakota, Tennessee, and Texas.

⁷ On Mar. 2, 1928, the prohibition of taxicab driving was declared in a county court of Ohio to be unconstitutional.

In the following instances the provision occurs in the laws of two States: New Jersey and Pennsylvania prohibit work in the manufacture of nitro and amido compounds and the handling of any dry substance or dry compound containing lead in excess of 2 per cent; Ohio and Utah, work in smelters; Ohio and Pennsylvania, trucking, section work on railroads, and employment as gas or electric meter reader; North Dakota and Oregon, messenger service; and Ohio and Washington, employment as bell boy.

Work on certain kinds of moving abrasives is prohibited in New York and Ohio, though wet grinding may be permitted in New York. Michigan also has such a law, but because of ambiguity in wording it has never been enforced.

Four States—Louisiana, Michigan, Minnesota, and Missouri—prohibit the cleaning of moving machinery.

Lifting or carrying heavy weights (other than in core rooms) is prohibited in California, Massachusetts, Ohio, Pennsylvania, and Washington; work in quarries is prohibited in Arizona, New York, Ohio, Oklahoma, and Wisconsin; and core making is regulated in Massachusetts, Minnesota, New York, Ohio, and Pennsylvania.

Employment for certain periods before and after childbirth is prohibited in Connecticut, Massachusetts, Missouri, New York, Vermont, and Washington.

Character of Prohibition or Regulation

THE OCCUPATION from which women are most commonly excluded by law is mining, which is prohibited in 18 States, 8 of which have established no other legal bars to women's employment. Two States only have long lists of occupations at which women are not permitted to work and in most of which women in all other States are legally free to engage. In all, 37 prohibitions or regulations have been set up by law in 28 States, and of these 23 are concentrated in Ohio, Pennsylvania, and New Jersey (13 in Ohio only, 5 in Pennsylvania only, 3 in both Ohio and Pennsylvania, and 2 in both New Jersey and Pennsylvania). The remaining 14 prohibitions or regulations are scattered over 27 States.

Mining.—Mining as an occupation for women is prohibited in Alabama, Arizona, Arkansas, Colorado, Illinois, Indiana, Maryland, Missouri, New York, Ohio, Oklahoma, Pennsylvania, Utah, Virginia, Washington, West Virginia, Wisconsin and Wyoming—18 States in all. In eight of these States, as already indicated, all other occupations are open to women; in Colorado only one other occupation—work in coke ovens—is prohibited; and in Arizona, Oklahoma, and Wisconsin work in quarries is the only other prohibited employment.

Lifting or carrying heavy weights.—In five States—California, Massachusetts, Ohio, Pennsylvania, and Washington—women are not allowed to perform tasks that involve the lifting or carrying of heavy weights. In California and Massachusetts boxes, baskets, or other receptacles weighing 75 pounds or more must be equipped with pulleys, casters, or other contrivances so that they may be easily moved. In California this regulation applies to mills, workshops, packing, canning, or mercantile establishments, and in Massachusetts to manufacturing or mechanical establishments. Another California regulation does not specify the maximum weight but prohibits the lifting

or carrying of "any excessive burden" in mercantile establishments and in factories, which by definition include laundries and dry-cleaning plants.

Twenty-five pounds is the maximum weight that women in the fruit and vegetable canning industry and in agricultural occupations in California are permitted to lift or carry, and in Washington women in manufacturing and mercantile establishments are not allowed to lift or carry "an excessive burden." The Industrial Board of Pennsylvania has ruled that women shall not be required or allowed to lift heavy weights in explosive plants, while the law of Ohio prohibits employment requiring the frequent or repeated lifting of weights in excess of 25 pounds.

Core-room regulations.—Regulations regarding the work of women in core rooms have been set up by five States—Massachusetts, Minnesota, New York, Ohio, and Pennsylvania. Minnesota prohibits women from placing cores in ovens or taking them out. Minnesota and New York prohibit the making or handling of cores the weight of which (including core box and plate) exceeds 25 pounds. A similar restriction in Ohio and Pennsylvania regarding the making or handling of cores specifies 15 pounds as the maximum weight. Massachusetts forbids the lifting of any core or cores upon one plate with total cubic content of more than 1 cubic foot or total weight of more than 25 pounds, unless assisted by mechanical appliances that limit to 25 pounds the physical effort involved. Massachusetts also requires that no woman shall work on any core with total cubic content exceeding 2 cubic feet, or with total weight (including plate and core box or boxes) exceeding 60 pounds. In New York, Ohio, and Pennsylvania women are not permitted to handle cores having a temperature of more than 110° F.

Massachusetts, New York, Ohio, and Pennsylvania require specially constructed partitions between rooms in which core ovens are located and rooms where cores are made by women, if the making and the baking of cores are simultaneous operations. Furthermore, all openings in the partition must be vestibuled with some self-closing device that will effectually trap gases, fumes, and smoke.

Employment before and after childbirth.—Connecticut, Massachusetts, Missouri, New York, Vermont, and Washington—six States in all—have legislation prohibiting the employment of women immediately before and after childbirth. The periods set are as follows: Massachusetts and Vermont, two weeks before and four weeks after childbirth; Connecticut, four weeks before and four weeks after; Missouri, three weeks before and three weeks after; New York, four weeks after; and Washington, four months before and six weeks after.

Blanket prohibition.—There are three States—Kansas, Michigan, and Washington—whose laws in general terms prohibit the employment of women in dangerous occupations. The Kansas act specifies that women shall not work in any industry or occupation "under conditions of labor detrimental to their health or welfare"; the Washington law substitutes the word "morals" for "welfare"; and that of Michigan provides that no woman "shall be given any task disproportionate to her strength, nor shall she be employed in any place detrimental to her morals, her health, or her potential capacity

for motherhood." Another Michigan act forbids the employment of women "in any hazardous employment, or where their health may be injured or morals depraved."

PROHIBITED AND REGULATED EMPLOYMENTS FOR WOMEN

State	Industry, operation, etc., covered	Citation
Alabama	Mines	Code, 1923, sec. 1724.
Arizona	Mines, quarries, coal breakers	Revised Statutes, 1913, par. 3129.
Arkansas	Mines	Digest, 1921, secs. 7260 (as amended by acts of 1921, No. 100)-7286.
California	Lifting box, basket, bundle, etc., weighing 75 pounds or more. (Applies to mills, workshops, packing, canning, or mercantile establishments.)	Acts of 1921, ch. 903, sec. 2; industrial welfare commission order Nos. 2, Apr. 13, 1916, and 4, June 15, 1917.
	Lifting "any excessive burden" in mercantile establishments and factories (including laundry, dry-cleaning plant).	Industrial welfare commission order Nos. 2, Apr. 13, 1916; 4, June 15, 1917, as amended Mar. 8, 1919.
	Maximum weight in fruit and vegetable canning establishments and agricultural occupations, 25 pounds.	Idem, Nos. 14, July 24, 1920, and 3a, June 4, 1928.
Colorado	Mines, coke ovens	Compiled laws, 1921, secs. 3482-3613.
Connecticut	Specified unemployed periods before and after childbirth (4 weeks before, 4 weeks after).	Acts of 1913, ch. 112.
Illinois	Mines	Revised Statutes, 1917, ch. 93, secs. 7-28; acts of 1921, pp. 526, 549, 567; act of June 29, secs. 1, 36, 48.
Indiana	do	Acts of 1923, ch. 177, sec. 18.
Kansas	No specified industry, but blanket law prohibiting employment in any industry or occupation under conditions of labor detrimental to health or welfare.	General Statutes, 1915, sec. 10496; acts of 1915, ch. 275.
Louisiana	Cleaning moving machinery	Acts of 1908, No. 301, sec. 17.
Maryland	Mines	Acts of 1922, ch. 307, secs. 173, 174.
Massachusetts	Lifting or carrying heavy weights (other than in core rooms). Boxes, baskets, etc., weighing 75 pounds or over must be equipped with pulleys, etc., so as to be easily moved. (Applies to manufacturing and mechanical establishments.)	Acts of 1913, ch. 426, as amended by acts of 1914, ch. 241, and acts of 1915, ch. 27.
	Core making regulated—25 pounds maximum weight for physical effort. In certain cases, 60 pounds maximum.	Acts of 1912, ch. 653; acts of 1916, ch. 308; board of health rules, Dec. 19, 1912; board of labor and industry rules and regulations for foundries, 1917, secs. 28-30.
	Specified unemployed periods before and after childbirth (2 weeks before, 4 weeks after).	Acts of 1911, ch. 229.
Michigan	Cleaning moving machinery	Acts of 1923, No. 206, sec. 11.
	Work on moving abrasives ¹	Acts of 1909, No. 285, secs. 27, 31, 54.
	Blanket law—no task disproportionate to strength, nor any place detrimental to morals or health.	Act of 1919, No. 239.
Minnesota	Oiling or cleaning moving machinery	General Statutes, 1913, secs. 38, 70; acts of 1913, ch. 316, secs. 9, 20.
	Core making regulated: prohibits placing cores in ovens or taking them out; maximum weight 25 pounds.	Acts of 1919, ch. 84, secs. 20, 21, 30.
Missouri	Cleaning moving machinery	Revised Statutes, 1919, sec. 6788.
	Mines	Idem, sec. 7484.
	Specified unemployed periods before and after childbirth (3 weeks before, 3 weeks after).	Idem, sec. 6772.
	Machinery not to be cleaned while in motion. Work between traversing or the fixed and traversing parts of any machine moved by any mechanical power except the machine she is operating.	Acts of 1909, p. 502.
New Jersey	Manufacture of nitro and amido compounds and the handling of any dry substance or dry compound containing lead in excess of 2 per cent.	Department of labor safety standards, 1917, pp. 4, 8, 14, 21.
New York	Mines, quarries	Acts of 1921, ch. 50, sec. 146 (6), and ch. 68, sec. 1275.
	Core making regulated: maximum weight 25 pounds; maximum temperature 110° F.	Idem, sec. 147.
	Specified unemployed periods after childbirth (4 weeks after).	Idem, sec. 148.
	Certain kinds of moving abrasives. (Wet grinding permitted.)	Idem, sec. 146, par. 8, as amended by ch. 642, sec. 6.
	Employment in basements of mercantile stores and restaurants only on permit if sufficiently lighted, ventilated, and sanitary.	Idem, sec. 383, as amended by acts of 1924, ch. 466, sec. 383.

¹ Because of ambiguous wording, however, this law has never been enforced.

PROHIBITED AND REGULATED EMPLOYMENTS FOR WOMEN—Continued

State	Industry, operation, etc., covered	Citation
North Dakota	Messenger service	Acts of 1919, ch. 174; minimum wage department order No. 6, Aug. 16, 1920.
Ohio	Work as crossing watchman, express driver, molder, taxi driver, jitney driver, freight or baggage elevator operator, baggage or freight handler; work in blast furnaces, shoe-shining parlors, bowling alleys, or pool rooms; delivery service.	General Code, 1910, sec. 1008; amended by acts of 1919, v. 108, pt. 1, p. 541.
	Smelters	Do.
	Work as bell boys, quarries, mines	Acts of 1919, v. 108, pt. 1, p. 541.
	Core making regulated: Maximum weight, 15 pounds; maximum temperature, 110° F.	Industrial commission rules, Nos. 34-37, Dec. 15, 1917.
	Certain kinds of moving abrasives	Acts of 1909, v. 100, p. 63; 1911, v. 102, p. 427.
	Lifting or carrying heavy weights in excess of 25 pounds (other than in core rooms).	Acts of 1919, v. 108, pt. 1, p. 541.
	Trucking, section work on railroads, employment as gas or electric meter reader.	Do.
Oklahoma	Quarries, mines	Revised Laws, 1910, sec. 3739.
Oregon	Messenger service	Industrial welfare commission orders Nos. 40, 42, 43, Oct. 14, 1919.
Pennsylvania	Mines	Pennsylvania Statutes, 1920, secs., 13580-13585.
	Lifting heavy weights in explosive plants (other than in core rooms).	Industrial board rule W-4 (b), (c), Oct. 27, 1917; department of labor and industry rule W-2, (3), (4), Mar. 24, 1925.
	Acetylene and electric welding or burning, handling nitrators in the manufacture of nitroglycerine, taking down blue beds after the process of lead corroding, setting up blue beds in the corroding stacks of the Old Dutch process (except buckles or lead plates not previously corroded) operating cranes, and work for railroad corporations as messengers calling train crews.	Industrial board rules, W-8, Aug. 9, 1918, W-9, Sept. 13, 1918, W-14, Oct. 11, 1918, W-17, Nov. 8, 1918; department of labor and industry rules, W-4, Mar. 24, 1925, W-5, Mar. 24, 1925, W-7, Apr. 23, 1925, and W-9, Mar. 24, 1925.
	Manufacture of nitro or amido compounds and handling of any dry substance or dry compound containing lead in excess of 2 per cent.	Department of labor and industry regulations for manufacture of nitro and amido compounds, sec. 8 (i), Sept. 5, 1926; industrial board regulations for lead corroding and oxidizing, sec. 2, Aug. 1, 1917.
	Trucking, section work on railroads, gas or electric meter readings.	Industrial board rules, W-7, July 19, 1918; W-15, Nov. 8, 1918; department of labor and industry rules, W-3 and W-8, Mar. 24, 1925.
	Core making regulated: Maximum weight 15 pounds; maximum temperature 110° F.	Industrial board regulations for foundries, sec. 9, Nov. 1, 1915.
Utah	Smelters and mines	Compiled laws, 1917, sec. 3668.
Vermont	Specified unemployed periods before and after childbirth (2 weeks before, 4 weeks after).	Acts of 1912, No. 85, as amended by acts of 1917, No. 177; General laws, 1917, sec. 5843.
Virginia	Mines	Code, 1919, secs. 1843-1887, as amended by acts of 1924, ch. 476.
Washington	Work as bell boy	Industrial welfare commission orders, No. 21, June 2, 1920, and No. 23, Oct. 4, 1921.
	Lifting "an excessive burden" in manufacturing and mercantile establishments.	Idem, No. 30, Mar. 20, 1922.
	Certain unemployed periods before and after childbirth (4 months before, 6 weeks after).	Idem, No. 25, Dec. 14, 1921; No. 30, Mar. 20, 1922.
	Mines	Acts of 1917, ch. 36, as amended by acts of 1919, ch. 201.
	Blanket law—any occupation under conditions detrimental to health or morals.	Acts of 1913, ch. 174, sec. 2; industrial welfare commission order No. 18, Nov. 10, 1918.
West Virginia	Mines	Acts of 1907, ch. 78, secs. 17, 27, as amended by acts of 1915, ch. 10, sec. 32.
Wisconsin	Mines, quarries	Wisconsin Statutes, 1923, sec. 103.05, par. 3 (d).
Wyoming	Mines	Compiled statutes, 1910, sec. 3107.

HEALTH AND INDUSTRIAL HYGIENE

Hospital Service for Patients of Moderate Means ¹

A SURVEY of the facilities available in hospitals for persons of moderate means, made by the committee on the cost of medical care, shows what is being done to provide adequate medical service for the large part of the population who will not accept or who are not eligible for charity service, but who can not pay the rates usually charged for private service.

The demand for hospital service has grown rapidly in recent years among all groups of people so that now hospitalization is a common feature in the care of illness. Although the earlier hospitals made little provision for persons of moderate means, the large wards being designed primarily for the poor and the single rooms for well-to-do patients, the large number of the moderately well-to-do who are now demanding care in the hospitals has created a new and serious problem in the hospital world.

The statistical data for the present study were secured from hospitals having at least 100 beds, 627 replies suitable for tabulation being received out of a total of about 900 letters of inquiry. In addition, data dealing with tendencies in hospital construction were provided by architect members of the American Hospital Association and certain illustrative material giving specific examples of measures adopted in some hospitals to provide for patients of moderate means was secured.

As a result of the necessity for readjustment in the physical structure of the hospitals there seems to be a general tendency to substitute for the hospital having only a series of large open wards on the one hand and a number of single rooms on the other, one providing a graduated series of accommodations somewhat similar to those provided in a modern hotel. The provisions being made by the hospitals for persons of moderate means include beds in semiprivate rooms, beds in small wards, and relatively inexpensive single rooms. Of 270 hospitals responding to an inquiry regarding the types of accommodations provided, all but 15 had some provision such as small wards or semiprivate rooms for the use of persons in moderate circumstances. During the past 20 years a decided change has taken place in the percentage of beds provided in large wards. In 1908 about 28 per cent of the beds provided for in the hospitals designed by the architect members of the American Hospital Association were in wards of 10 beds or more while in 1928 only 7 per cent were in such wards. The number of beds available in each of the several types of accommodations is of first importance to the patient who may be unable, if there

¹ The Committee on the Cost of Medical Care. Hospital service for patients of moderate means, by Niles Carpenter. Washington, 910 Seventeenth St. N.W., 1929. (Abstract of Publication No. 4.)

is a shortage of beds of a particular class, to secure the type of service of which he is in need. Information secured from 467 hospitals with a total capacity, exclusive of large wards, of 59,141 beds showed that about 45 per cent of the beds were in single rooms. The building plans of many hospitals, however, include the provision of special facilities for persons of moderate means, and a number of hospitals reported that their contemplated new construction is to be primarily for the use of such patients. The Massachusetts General Hospital, Boston, is now building a "hospital for people of moderate means" which is to contain 300 beds arranged in wards of nine cubicles, 4-bed wards, 2-bed semiprivate rooms, and single rooms. The rates are to vary from \$4 a day for cubicles to \$6.50 for single rooms.

The change which is taking place in the provision of hospital accommodation for the middle-class patient is reflected in the administration of hospitals. Formerly a sharp distinction was drawn between "private" and "ward" patients and the status, privileges, and types of care of the two classes of patients were sharply defined. These distinctions are breaking down, however, and part, at least, of the privileges formerly accorded to patients in private rooms are now extended to patients in semiprivate rooms and small wards and even to patients in the larger wards.

Rates Charged for Hospital Services

THE prices charged for hospital care are naturally of great importance to both the patient and the hospital, even if the latter is heavily endowed. The hospital charges may be divided into two classes: First, the daily or basic rate for room or for bed, including food, nursing, and such services as the hospital provides under general care, and second, the extra or special-service charges.

Basic daily rates for single rooms range in the average from \$5 to \$6.99 per day and for semiprivate rooms or small wards from \$3 to \$4.99. The upper limit for single rooms is high, however, as over 1,400 out of a total of 26,900 single rooms were priced at \$11 or more per day while only four semiprivate room beds out of a total of 15,437 were as high, and there were no small-ward beds reported at more than \$9 per day. In general small-ward beds are cheaper than beds in semiprivate rooms, about one-third of the small-ward beds being available at less than \$3 per day as compared with about 11 per cent of the beds in semiprivate rooms.

The room charge, however, is not the cost which is of major importance, as it is the extra or special-service charges for operating room, anesthesia, laboratory service, X ray, special nursing, etc., which bring the total bill often to an unexpectedly large figure. Several hospitals have attempted to lighten the burden by graduating the special-service charges according to the type of room accommodation, by the elimination of part of these charges, or by placing such charges on a flat-rate basis. Three forms of hospital service for which inclusive charges were found in some instances to be in effect were obstetrical service, tonsillectomy service, and diagnostic service. An example of the inclusive maternity-service charge is that which has recently been instituted in the Vassar Brothers' Hospital, Poughkeepsie, N. Y. An inclusive flat rate, regardless of the length of

stay in the hospital, is made to all mothers who have had prenatal care which the hospital staff considers adequate. The total charge for semiprivate patients is \$65 and for ward patients \$35. Inclusive rates for tonsil operations reported by one hospital, covering operating room and bed for 24 hours, were \$10 for private patients, \$8 for semiprivate patients, and \$5 for ward patients.

Financial Adjustments

THE emergency created by the sudden, urgent need for medical treatment often finds the patient unprepared to meet all the costs of medical care. In such cases some financial arrangement becomes necessary which will ease the financial burden of the patient and at the same time assure the hospital of as large a return as possible. Formerly adjustments were made solely on the basis of the type of accommodation furnished the patient, that is, adjustments were made for ward patients but almost never for patients occupying single rooms, although ministers and teachers, in some cases, received concessions on their hospital bills. At the present time, however, such rigid rules are being abandoned and patients are being considered individually on the basis of their social and economic requirements. In many hospitals some one person, either the superintendent, a social worker or admission worker, or a member of the business staff is appointed to make the financial adjustment and emphasis is placed on a sympathetic and tactful approach by them to the problems of the patient. The points inquired into may be not only the amount of the patient's income, but also the size of his family, his current expenses, debts, etc.

It was found that the most common form of adjustment was the reduction or remission of the charges, but in order that the service shall not have the suspicion of charity it is regarded as preferable to institute a deferred or installment basis of payment. Such a system has not always been successful, but some hospitals report only a small percentage of unpaid bills. There is also evidence of an effort at greater cooperation between the physician and the hospital in their financial relations with the patient, so that often either the hospital expressly limits the fee charged the patients of moderate means or there is an informal understanding to that effect between the physician and the hospital. The general import of all these arrangements, the report states, "appears to be that there is a slowly crystallizing recognition that the interests of hospital, physician, and patient are best served where the patient's total financial outlay for his illness is considered as an economic unit and where some kind of agreement exists between all three parties concerning its amount and distribution."

Extent of Illness in the United States

A COMPILATION of the existing statistical data relating to the extent of disease and disability in the United States, which was made by the committee on the cost of medical care,¹ shows something

¹ The Committee on the Cost of Medical Care. The extent of illness and of physical and mental defects prevailing in the United States, by Alden B. Mills. Washington, 910 Seventeenth Street, N.W., 1929. (Abstract of Publication No. 2.)

of the measure of this problem which is engaging the attention of many individuals and organizations.

The increasing financial burden resulting from sickness was the cause of the appointment, by the Washington conference on the economic factors affecting the organization of medicine, of a special committee to study the various phases of the question with a view to determining what, if any, solution could be proposed. Although studies of sickness data were somewhat outside the scope of the committee's work, such a compilation as the present report was regarded as important for use in connection with other reports.

A large amount of illness and defectiveness persists, although, as the report states, medical science has developed so remarkably in the past half century that some diseases which formerly levied a tremendous toll are now practically nonexistent and others are, to a considerable extent, under control. The continued existence, however, of serious disease conditions raises a question as to both the adequacy and the effectiveness of present curative and preventive medical services. The present report attempts to show how often, on the average, people are hampered or definitely disabled by illness during a year; how much time is lost because of these illnesses; the nature of the diseases; the number of persons suffering from physical and mental defects; and the kinds of defects which are most prevalent.

Frequency of Disabling Illness

IN REGARD to the frequency of disablement from illness, the report cites a number of studies by the United States Public Health Service which indicate that people are on the average disabled by illness at least once each year, the rate varying according to age and sex. Thus, men are disabled by illness about once each year, women from once to twice, and children more than twice per school year of 180 days. The studies on which these figures are based include a study of illnesses during a period of 28 months among a general population group in Hagerstown, Md., which disclosed an average rate of slightly more than one illness per person per year; and a study covering the employees of the Edison Electric Illuminating Co. of Boston for a 10-year period, which showed that the male employees had an average of slightly more than one illness per person per year and female employees two such illnesses annually. Among the other studies, one including the 1,282 office employees of a manufacturing concern, mainly women, showed an average of slightly over two cases of illness per person per year, while the 16,000 employees of the B. F. Goodrich Co., largely men, had an annual sickness rate of over one and one-half cases disabling for one day or more, and a group of school children in Hagerstown, Md., had an average of 2.4 illnesses per child during the school year. In one study the frequency varied according to the age differences, the rate being higher for the very young and the very old than for those in late adolescence and early maturity. Seasonal differences were reflected principally in the rates for the respiratory diseases. On the basis of the lowest rate for disabling illness shown by these studies, the report states, there would be about 130,000,000 cases of disabling illness in the United States each year, while if nondisabling illnesses were added the figures would be more than doubled.

Amount of Time Lost on Account of Illness

THE average length of time lost from their usual occupations by persons suffering from disabling illnesses was shown by these and similar studies to average from 7 to 8 days for adult males and from 8 to 12 days for adult females. A study by the Metropolitan Life Insurance Co. of 570,000 people in industrial communities showed that approximately 2 per cent on the average were ill on a single day. From these data it is concluded that the 36,000,000 wage earners in the United States lose at least 250,000,000 working-days per year, and the 24,000,000 school children lose 170,000,000 days per school year. These figures, it should be noted, take into account only about one-half of the total population.

Important Causes of Disability

THE same group of studies furnishes information as to the diseases or groups of diseases which cause these cases of illness and this loss of time. A tabulation of the most important causes of disability in the different studies shows that colds and bronchial conditions and influenza and grip are the most serious causes of disability from the standpoint both of frequency and of days lost. Digestive diseases and disorders are next in importance, followed by diseases of the pharynx, tonsils, and larynx; nonvenereal diseases of the genito-urinary system, including acute and chronic kidney disease; and diseases of the skin and cellular tissue. Headache is listed, although it is a symptom rather than a disease, and rheumatism was included among the most important causes of disability in most of the surveys.

A study of chronic illnesses made in Boston in 1927 showed that the most important were heart disease, organic nervous and mental disease, cancer, and arthritis. At the time of the survey it was found that over 10 per cent of these cases had lasted 10 years or longer.

Reports from 107 physicians in rural counties of New York State, as to the diseases which most frequently cause demands for their services, listed the following diseases or groups of diseases as the ones most frequently occurring in their practices: Colds, bronchitis, and grip; digestive disorders (excluding diarrhea and enteritis under 2 years); surgical cases—operative, traumatic (excluding gynecologic); neuroses; diseases of children (excluding communicable diseases and diarrhea and enteritis); tonsillitis; gynecologic cases; heart disease; arteriosclerosis; and chronic arthritis.

Certain communicable diseases must be reported by physicians, under the State laws. The 10 most frequently reported in New York State in the years 1924 to 1927, inclusive, in the order of frequency, were measles, syphilis, pneumonia, scarlet fever, chickenpox, tuberculosis, whooping cough, diphtheria, mumps, and gonorrhea.

The following estimate is given in the report of the extent of specific diseases:

Syphilis and gonorrhea at any one time appear to be causing nearly 1 person per 100 to place himself under the care of a physician; authorities have stated that there are at all times approximately 700,000 persons with tuberculosis, 10,000 with pernicious anemia, and 110,000 addicted to narcotic drugs. In any one year there are in the United States over 1,000,000 cases of malaria. While childbearing is not a disease, it does cause a large amount of disability. In 1928

there were nearly 2,000,000 births in the registration area, many of them followed by complications and a considerable number (a larger proportion than in most civilized countries) by death. Over 36,000 cases of smallpox were reported in a recent year. Hospitals for mental and nervous diseases contain over 350,000 patients, and this figure is far below what the total would be if those not hospitalized were included. "Of the children now attending school and college, 'over 960,000 will enter a hospital for mental disease at some period in their lives if present rates for first admissions continue.'" These figures include only the more serious mental diseases and take no account of the large numbers with lesser mental disturbances. Hospitals other than those for nervous and mental diseases contain, on the average, over 350,000 patients at all times. The total in all hospitals on a single average day is about 700,000.

Types of Physical and Mental Defects

THE number of persons suffering from physical defects and the kind of defects which are most prevalent was revealed by the examinations by the Life Extension Institute of over 100,000 adult males in the prime of life. It was shown that the great majority suffer from one or more defects which are more or less serious. Defective vision, abnormal tonsils, hypertrophic rhinitis, constipation, and albumin in urine showed the highest percentages but although the more serious defects were found in a smaller percentage of cases they were large enough to be significant. Serious heart conditions were found in over 2 per cent of the men examined and "moderate" hardening of the arteries in nearly 3 per cent. Thirteen per cent had hemorrhoids, 7 per cent neurasthenia and nervousness, and 7 per cent of those having a urinalysis had some sugar in the urine. It is regarded as significant that these important and, many of them, potentially dangerous defects were discovered in a selected white group, mainly professional and business men and skilled workers who were actively engaged in their usual occupations.

Six different surveys among school and preschool children showed that the percentage having one or more defects ranged from 60 to 95 per cent, the most important defects being defective teeth, enlarged or diseased tonsils, visual defects, adenoids, conjunctivitis, and defects of nutrition. It has been shown that children who have, or have had, diseased or enlarged tonsils are more liable to rheumatism, lumbago, neuralgia, neuritis, heart, and ear diseases than those with normal tonsils, and the other common defects of childhood noted above are, also, certainly productive of much ill-health in later life.

It has been estimated that the number of persons in the United States who are mentally defective (feeble-minded, imbeciles, and idiots) is over 900,000, the number of blind is over 100,000, the number with major speech defects is approximately 1,000,000, and the number of school children wholly or partly deaf is placed at 3,000,000.

In conclusion the report states that the study, although limited by the incompleteness of the data, has revealed "an extent of illness and physical and mental defectiveness in the population which causes an incalculable amount of human suffering and economic loss. Some of these diseases and conditions rob the Nation's people of their vitality and destroy their efficiency; others lead to sudden death and the premature cutting off of life. This continuance of disease, part of it preventable, indicates a field for the more widespread and efficient utilization of preventive and curative measures now known."

Pulmonary Disease Caused by Asbestos Dust¹

THE extraction and manufacture of asbestos involves the constant exposure of the workers to asbestos dust. The long fibers of asbestos are used in the textile industry for the manufacture of cloth, braid, rope, theater curtains, and for finishing pistons for steam engines, and the shorter fibers are used in the manufacture of felt, paper, cardboard, varnishes, cements, and rubber tires. Asbestos is also used as an electrical insulator, in the manufacture of tiles, planks, paneling, and exterior covering for buildings, mattresses, heat-insulating gloves, firemen's clothes, laboratory equipment, etc. Its use has grown rapidly in the past 20 years and the fact that all processes from extraction onward involve a considerable hazard, makes essential the installation of efficient exhaust systems and the introduction of other safety measures.

A digest of an article in a recent issue of *Tubercle*, published in the *Bulletin of Hygiene*, London, December, 1929, gives the results of a study of the clinical and radiological record of 15 cases of pulmonary asbestosis occurring among workers in an asbestos factory.

The dust from asbestos produces a form of pneumoconiosis, of which the principal symptom is dyspnea (difficult or labored breathing), accompanied in most cases by a cyanosis in which the skin assumes a slightly leaden hue. The chest expansion may be reduced to one inch or even less but cough and expectoration are usually not present to any great extent. The physical signs are a bilateral pulmonary fibrosis attacking the bases of the lungs and, as frequently happens in cases of silicosis, pulmonary tuberculosis may supervene and modify the clinical picture.

In regard to the X-ray findings, the article states that the—

Most noticeable feature of the skiagram is the presence of shadows suggesting a diffuse fibrosis of the lower two-thirds of the lungs. The fine ground-glass quality of the shadows is noteworthy and the bronchial striations may give a cobweblike appearance to the film. As these striations radiate outward from the lung roots they cut the edge of the cardiac shadow, especially on the left side, giving a shaggy appearance as if the heart were encased in coarse felt. When more definite mottling is present it lacks the coarse quality seen in the skiagrams of other forms of pneumoconiosis. Other features are signs of old basal pleurisy, obliteration of costo-phrenic angle, thickening of the apical pleural cap. Post mortem, the diagnostic feature which serves to distinguish the condition from other forms of pneumoconiosis is the presence in the lungs of golden yellow foreign bodies with segmented outline and clubbed extremities bearing a superficial resemblance to minute crustacean forms.

¹ International Labor Office. *Occupation and Health Brochure No. 27*. Geneva, 1925.

INDUSTRIAL ACCIDENTS

The Foreman's Responsibility for Accidents ¹

By H. W. HEINRICH, ASSISTANT SUPERINTENDENT ENGINEERING AND INSPECTION DIVISION, TRAVELERS INSURANCE CO.

SEVENTY-FIVE years ago, a young man less than 20 was engaged as a divisional railroad-telegraph operator at a salary of \$35 a month. His authority and apparent responsibilities were limited. He was ambitious, however, and with a view to the future not only mastered every detail of the work assigned to him, but also gradually acquired a comprehensive knowledge of the operation of the entire railway system. One morning, the general superintendent of the division was late in arriving at his office, and in his absence an accident had occurred. Immediate and decisive action was required. By virtue of his thorough knowledge, the young telegraph operator grasped the situation at once, and realizing the necessity for someone to assume responsibility, he took immediate action. There was only one track on this particular division and freight trains were waiting for the express, which had the right of way. He telegraphed orders to the conductor of the express, to give the freight trains 3 hours and 40 minutes of express time, and asked for an acknowledgment. He then wired to the conductor of each freight train to proceed, thus clearing up a situation that might have resulted in confusion, delay, and loss of revenue.

The subsequent progress and development of this young man, in the business world were truly phenomenal. Advancement to increasingly important positions convinced him that the acceptance of responsibility is a vital factor in industrial leadership. He became an employer (giving profitable work to thousands of men and women), a financial power, a steel magnate, and a multimillionaire. He endowed charitable and educational institutions, and his death, at a ripe age in 1919, was mourned by the whole world.

The biographies of eminent and successful men of past generations are replete with illustrations of the same kind. Prominent men of to-day—Hoover, Schwab, Crowley, Ford, Davis, Edison, Pelley, and a host of others—believe in responsibility and accept and practice it. Dodging responsibility or “passing the buck” is practically an unknown quality in the make-up of successful men. Gantt said: “The authority to issue an order involves the responsibility to see that it is properly executed.”

One of the many successful men who have worked in supervisory capacities as foremen or leaders while making their way to the top, said: “Good management is of more avail than perfect equipment.”

¹ Speech delivered at the seventh industrial course of the Syracuse Safety Council, Nov. 14, 1929.

Napoleon stated that "Every man carries the baton of a marshal in his haversack." He was speaking of soldiers, but the same principle applies to industrial workers. The baton of a successful executive, namely, the recognition of his responsibilities and the will to accept them, lies in the hand of every foreman.

One of the most important industrial problems is that of training men in the habits of industry—safe and efficient habits. We need not lay so much stress on results of a temporary nature, if our methods are correct. The new worker follows the habits of the older men, and of his foreman; therefore this training must be done largely by foremen.

Acceptance of Responsibility Necessary for Success

GENIUS is but the capacity for taking infinite pains. Success depends upon intelligence and hard work, and above all, with regard to industrial leaders and executives, it depends upon the ability and willingness of the individual to accept responsibility.

A supervisor or a foreman stands upon the first rung of the executive ladder. Because of certain valuable personal qualities, he has been selected to direct the work of other employees. Unfortunately, in the average case, he enters upon this phase of work uninstructed in the art of executive leadership, and so gradually that he may not realize that his functions as an executive are markedly different from those of an employee without authority. Sometimes an employee is selected for a position of authority merely because he is a more skillful workman than his neighbors, and the choice proves to be an unwise one.

And yet, the intelligence of the foreman, and his vision, leadership, executive qualities, and ability to interpret the principles of the concern that he represents, may be important factors in the profit or loss of a business, and in the prestige, smooth functioning, efficiency, economy, and ultimate success or failure of the organization.

We read, of the "man behind the plow," of the lowliest laborer, of the capitalist, the professional man, the artist, and the scientist. All are eulogized. But, oh for the skill of the Hoosier poet, to picture in homely verse the real key man of industry, the hub of the masses—the foreman.

Human intelligence is only valuable as it is used. It is said that only one one-thousandth part of the average brain capacity is actively employed. If this is true, then a man may become an outstanding success by putting just a bit more of that "gray matter" to work than does his neighbor. In no place or position in the world is there a better opportunity to show results and win success than in foremanship. Common sense, logic, initiative, and acceptance of responsibility are all that are required. We take loyalty, knowledge of the job, and work capacity for granted, for without them we have no business to accept wages or salary from an employer.

Thousands of employers have thought and said, at times: "Show me a man who does what he is told, and does it intelligently, and I'll show you a man who will be successful." Likewise, I say, "Give me a foreman who can accept responsibility and I'll show you a man who gets results." What is there about responsibility that makes it so hard to accept? Nothing but unwarranted fear—fear of failure, fear of consequence. It is true that every man who tries

may fail; every man who leads must accept the consequences. Bear in mind, however, that straddling the fence gets us nowhere, and that in accepting responsibility we at least expose ourselves to the probability of winning sometimes; and when we do win, the consequences that we were so afraid of turn out to be happy ones. Fear to accept responsibility is rank pessimism. If we are afraid, it is because we think we can't win.

Fear to accept responsibility keeps more good men in subordinate positions than any other one factor.

A live-wire superintendent once said to a trusted foreman: "Go ahead and set up the job and turn out the work." What an opportunity for a good foreman. In this case, however, as in many others throughout industry, a series of questions followed, instead of action. The foreman wanted to know when to start, what men to use, where to get the tools, and how soon the job was wanted. He complained also that he would have to neglect other work if he did this job, and, in fact, placed the entire burden of responsibility right back upon the superintendent, who was obliged to supervise the job himself. Now, bear this in mind: The job was done. Work was redistributed so that the new job could get under way without disrupting the regular production schedule. All the trivial questions and objections raised by the foreman were ironed out, but not by him—by the superintendent.

If the foreman had understood responsibility and been willing to accept it, he would have realized that here was an opportunity to advance his own interests. Instead, his negative attitude clearly showed that he was not yet ready for a position of authority.

The reaction of the superintendent to the foreman's failure to assume responsibility, was one of disappointment, irritation, and dissatisfaction. Said the Scotch poet: "Oh, wad some power the giftie gie us, to see oursel's as others see us!" Foremen of America, think over this idea of accepting responsibility. There's meat in it—yes, money and success.

Of all the time-wasting, irritating, and costly situations that bedevil the life of the busy executive, there's none so trying as that which is brought about by the foreman who isn't a foreman, and who places on the executive's shoulders the burden of responsibility that he, himself, is paid to assume. Foremen are paid to run their departments and to supervise their men.

Knowledge of the Job

THERE'S another and more cheerful side to the picture. A foreman was called into conference on a most difficult production problem. The management was extremely anxious to accept a large order for a certain product for the manufacture of which the machinery in the plant was not designed. The executives were frankly skeptical of their ability to do the work, and called in the foreman of the automatic-screw-machine department—chiefly to have him confirm their doubts. With an air of kindly tolerance, the general manager said: "Jones, can we turn out 10,000 of these pieces in one month?" To the intense surprise of the men in conference, Jones said, after carefully studying the sample: "Yes, we can fill that order. Shall I start

at once?" "Now wait a minute, Mr. Jones," came the answer. "Frankly we thought it was impossible. How do you propose to go about it?" "Well," said the foreman, "it's an unusual job and won't go on our standard machines; but we still have those special turret lathes that were taken out of the department when we reorganized, and they will handle the job nicely. I'll have them set up again, if you say so. The cost will be nominal. We'll have to have some special cutters made by the tool department. The wooden handles can be bought in town, and the assembly can be done here. We'll need a precision gauge of special make, and an extra operator whom I can borrow from building B where work is a bit slack at present."

Summing it all up, the foreman displayed a knowledge of the business and an intelligence that was gratifying and surprising. Further, he seemed to know so much about how the job should be done that he was allowed to do it. Not only did he fulfill his promise with regard to his own part of the work in the automatic-screw-machine department, but in addition, he gave such evidence of executive ability that he was authorized to deal with the novelty woodworking plant for the purchase of handles, and also to supervise the assembly, finishing, and testing operations.

Jones is now assistant general works manager of this plant. He was a good foreman; he knew how to accept responsibility. Suppose he had failed. But why suppose? Know your job, and then go ahead and accept responsibility and you can not fail. That is what Jones did, and you, also, can do it equally well.

Industry must have capital. It needs the services of inventors, scientists, mathematicians, and engineers. It must have executives, salesmen, and production managers. Employers there must be, if employees are to receive remuneration, but the hub of the wheel, the heart of the industrial situation, is the man who personally directs the work of the employees. By whatever name he is called—foreman, supervisor, gang boss, head man, or straw boss—there is after all only one man who tells the worker what to do and how to do it, and sees to it that the work is done; and that man, to whom I refer herein as a foreman, controls his own fortunes and plays an important rôle in the success of the organization of which he is a part.

Responsibility—the hallmark of success—accept it and succeed. Do not waste time on matters of finance or personnel when they are outside of your job, but remember that practically all operations and methods of procedure are related to your work, in one way or another. Learn about them and become familiar with them; be ready, always, to take the job of the man next higher up; take advantage of the opportunities that so often come to persons with a sense of responsibility; and in accepting responsibility do not fear that you will be alone. The higher pay that accompanies the better positions may not require more manual labor, but it must be earned; and one way to earn it is by accepting responsibility whenever the opportunity offers. The superintendent and works manager, the production and sales heads, yes, the president of your company himself, must accept responsibility. Your mistakes are their mistakes. Your success is their success. The board of directors or the stockholders must have an accounting with someone for everything that goes on.

Do you suppose that any high executive officer would dream of saying to a board of directors: "I'm sorry, gentlemen, but I am not

to blame. That big order was lost because one of my foremen turned out a batch of goods of inferior quality." This executive directs the employment of the men—their training and instruction—he provides the tools and enforces supervisory methods, and is responsible for events that occur even while he is away from the plant. How about you? You, as a foreman, know your men; you personally instruct and train them, you are on the job, and have the best opportunity in the world to correct improper practices before they cause trouble. Don't make the mistake of dodging responsibility—and, bear in mind, that "goes" for everything that happens in the conduct of the work under your supervision. Accidents, for example, are your responsibility, just as much as are errors—for, in fact, accidents really are errors. Production and quality of work are your responsibility; so are discipline, order, morale, and good house-keeping.

Accidents and the Foreman

INJURIES resulting from accidents occur far too often. Thousands of lives are lost and immeasurable suffering exists because of accidents. Billions of dollars are lost annually. You and all other purchasers, and the consuming public in general, pay these losses in the prices charged for food, clothes, shelter, and the other necessities and the luxuries of life. Research proves that 98 per cent of accidents are preventable and that 88 per cent are due, not to unguarded machinery but to supervisory conditions within the control of the foreman. Accidents represent man failure, and the foreman is the one person in industry who knows how to control men.

Do you realize that the real causes of accidents are likewise the causes of inefficiency, poor economy, poor production, and poor business generally? They are. Here are some of them: Failure to issue and enforce instructions, inattention, poor discipline, improper and unsafe practices, inexperience, and undue haste. Are not these conditions the very ones that you, as a foreman, are fitted by experience to control? Moreover, you actually do control them when they affect volume and quality of work. Suppose you are requested to fill an order for a certain number of units of production, and in giving instructions to your men one of them says that he can't follow them because he is too busy; or suppose that he follows the instructions half-heartedly and makes mistakes or spoils much valuable material. Quite properly, discharge or other severe penalty is the very last remedy you would resort to, yet you as a foreman—a leader of men—do not admit failure. You "get results" by one means or another. The work goes along, difficulties are ironed out. By applying true foremanship the job is done, and done properly. In carrying on your work successfully you are controlling the conditions that affect profitable production.

Bearing in mind that these conditions are likewise the ones that produce injuries, it is obvious that you can control accident occurrence just as readily as you can govern defects and volume of production. This fact becomes more obvious when it is recognized that a serious injury is not an isolated happening by itself, but is the logical consummation of 329 other precisely similar accidents, a 1 of which have the same cause, but 300 of which do not result in actual injury. The employee who is injured as the result of an accident has, in the

average case, made the very same mistake, the same error of judgment, violated the same instruction or taken the same chance, that finally caused the injury, many, many times before without, however, having been hurt. There lies the opportunity of the foreman to control accident frequency. There, in the foundation of injury—the accidents that have not yet caused injury—is the place to direct an attack. Injuries are like water over the dam. Learn from them but go to work upon the “injury in the making”—one of the 329 accidents that, in the average case, precede every serious injury. These are all visible occurrences and may readily be observed and corrected before trouble occurs.

Keep this ratio of accidents to injuries in mind when next you hear the assertion, “This is the first time an accident of this kind ever happened.” It may be the first time a serious injury occurred, but hundreds of similar accidents undoubtedly occurred which, fortunately, produced no injury, and these may be observed and checked by the very man who should hold himself responsible for them—the foreman.

We need to differentiate between blame (or guilt) and responsibility. A foreman need not hold himself morally guilty when an employee in his charge is injured, but he can not and should not evade responsibility under any circumstances whatsoever.

Remember that the authority to issue an order involves the responsibility to see that it is properly executed. The country depends upon you—the key man of industry, the foreman—to maintain that leadership among nations, of which we are so justly proud, in the safe, peace-time development of industry.

Safety in the Construction Industry

CONSTRUCTION engineers and contractors have long felt that because of the inherent difficulties in the construction industry, chief of which perhaps is the shifting character of their labor, it is impracticable if not almost impossible to maintain any sort of a successful safety organization or to promote safety practices among their workmen. Statistics of accidents in this industry have never been generally compiled, and if available at all they are very inadequate and of little use in efforts to reduce the accident hazard.

Gradually, however, this situation is being changed. Builders are recognizing that the industry can be made safer if definite well-directed efforts are put forth, a fact that is more and more being brought to public attention through the medium of articles and addresses. One such article appeared in the *American Contractor* (Chicago) for December 14, 1929. It relates the experience of a large construction company in the erection of a 55-story building in New York City; the company's safety program, however, covers all the operations of the company. This program, it is stated, is worked out on the premise that “safety work is profitable to the general contractor, the construction worker, and the industry as a whole,” and a definite scheme is outlined and a safety layout arranged when the job is commenced. The company reports from experience that “safety devices must be foolproof, universally used when used at all,

and that in addition to mechanical devices being installed, a wide diffusion of accident-prevention information among the entire job personnel is imperative."

On the building in question, "all exterior working stages are protected against falling objects by means of a safety flair device which follows the working stages upward at a distance of about four stories. All stairways, elevator shafts, or other floor openings, whether temporary or permanent, are guarded with railings, gates, screens, and such other protective devices as the experience of the company and an extensive study of prevailing circumstances in each case warrants. All stages are equipped with toe boards and rails, with screens filling the space between the two on the outside. Equipment and materials are kept neatly and compactly piled, rubbish is continually removed from the location, the floors kept clean, and a particular study made of the matter of a lighting system for all secluded areas."

Safety Instruction

INFORMATION on safety measures is given the entire working crew, and a safety committee functions under each foreman. Two carpenters, detailed to maintain a regular job inspection, are instructed to install immediately all the safety devices which this inspection shows to be necessary. While the activities of these safety inspectors and the mechanical devices used are held to be largely responsible for the excellent safety record made on this job, "the cooperation of the entire working crew in the endeavor is of vast importance in contributing to its success."

A physician and nurse occupied a well-equipped first-aid station on the job until the erection of the steel had been completed, the nurse and the first-aid station being retained until the project was practically completed. By immediate attention to minor injuries the severity ratio and the lost-time accidents are kept at a low figure.

The general contractor maintains all the safety equipment, but subcontractors' workmen are given the same treatment and service as are its own employees.

In spite of the cost of this safety program, the company finds it profitable, because of lower compensation insurance premiums and the increased efficiency and stable morale of the workmen.

Fire-Prevention Measures

ATTENTION is also given to fire-prevention measures. Standpipes installed according to the city building code follow within four stories of the steel erection at all times and are inspected daily. Water barrels equipped with overflow pipes are installed on all floors and are fastened in place beneath faucets in the temporary water lines that are maintained on all working levels. The dry-line standpipes have siamese connections on the ground floor, to which the city fire department may connect when the need arises.

Fire extinguishers are placed in conspicuous places on all floors and are inspected regularly. There is a watchman at each doorway on the ground floor and on each floor of the structure, both day and night. Facilities are available at all times for hoisting the city fire department's apparatus to any level upon call.

By its safety system the company has created a friendly competition among the job superintendents and to some extent among the various working crews. The humanitarian side of accident prevention is continually kept before the job crews and executives. "While money saving may be claimed as the main incentive behind safety programs in building construction, the welfare of the employees and their families is a matter of great moment to the modern construction organization."

National Safety Council Report on Industrial Accidents

AS SHOWN by the December, 1929, issue of the National Safety News (Chicago), the accidents occurring in a selected number of (more than 700) industrial establishments reporting to the National Safety Council showed a decline in 1928 as compared with either preceding year. Reduced to a frequency rate basis these establishments, representing 15 industry groups, showed a drop from 50,772 accidents in 1926 to 42,398 in 1927 and to 39,872 in 1928, or 21.5 per cent in the latter year as compared with 1926. In the same period there was a reduction of 14.2 per cent in the number of fatalities, of 27.4 per cent in the number of permanent injuries, and of 21.3 per cent in the number of temporary disabilities.

The report calls attention to the fact that the general decline in accidents has not resulted in a corresponding improvement in time loss as measured by the severity rate. In 1926 all establishments combined showed a severity rate of 2.1, and in 1928 of 1.71, or a reduction of 18.6 per cent. The reduction in the fatal severity rate in the same period was 16.7 per cent, in the permanent disability severity rate there was a 33.3 per cent reduction, and in the rate for temporary disabilities a 2.4 per cent drop is noted.

The following table, a rearrangement of that appearing in the December issue of the National Safety News (p. 22), gives the data classified by industry. Unfortunately the number of man-hours or of full-year workers is not shown, thus giving no idea of the extent of the employment covered by the establishments reporting.¹

NUMBER OF ACCIDENTS AND ACCIDENT FREQUENCY AND SEVERITY RATES IN SPECIFIED INDUSTRIES, REPORTED BY NATIONAL SAFETY COUNCIL, 1926, 1927, AND 1928

Industry group and year	Death			Permanent disability			Temporary disability			Total		
	Number	Frequency rate	Severity rate	Number	Frequency rate	Severity rate	Number	Frequency rate	Severity rate	Number	Frequency rate	Severity rate
Automotive:												
1926	23	0.07	0.43	376	1.17	0.61	6,899	21.54	0.34	7,298	22.78	1.38
1927	15	.04	.26	337	.97	.44	7,071	20.28	.34	7,423	21.29	1.04
1928	18	.05	.27	231	.58	.30	7,825	19.66	.60	8,074	20.29	1.16
Chemical:												
1926	44	.30	1.80	110	.75	.46	2,220	15.15	.27	2,374	16.20	2.33
1927	40	.29	1.72	81	.58	.43	1,886	13.55	.25	2,007	14.42	2.43
1928	41	.30	1.83	91	.67	.39	1,708	13.04	.21	1,900	14.01	2.43

¹ Since this article was prepared a more complete report covering 1928, including 2,557 establishments employing 1,629,647 workers with an exposure of 3,902,165,106 man-hours, has been issued by the National Safety Council under the title "Industrial accident statistics, 1929 edition." This report shows substantially the same rates as given in the accompanying table.

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NUMBER OF ACCIDENTS AND ACCIDENT FREQUENCY AND SEVERITY RATES IN SPECIFIED INDUSTRIES, REPORTED BY NATIONAL SAFETY COUNCIL, 1926, 1927, AND 1928—Continued

Industry group and year	Death			Permanent disability			Temporary disability			Total		
	Number	Frequency rate	Severity rate	Number	Frequency rate	Severity rate	Number	Frequency rate	Severity rate	Number	Frequency rate	Severity rate
Construction:												
1926.....	12	.51	3.05	95	4.02	1.64	1,557	65.92	.98	1,664	70.50	5.67
1927.....	18	.75	4.50	55	2.29	1.82	1,317	54.91	.78	1,390	57.96	7.10
1928.....	11	.42	2.49	60	2.27	1.21	1,329	50.23	.88	1,400	52.91	4.59
Electric railways:												
1926.....	1	.22	1.29	0	0	0	95	20.47	.38	96	20.69	1.67
1927.....	1	.22	1.29	0	0	0	79	16.97	.94	80	17.18	2.23
1928.....	0	0	0	0	0	0	88	20.42	.42	88	20.42	.42
Food:												
1926.....	4	.01	.61	42	1.07	.78	977	24.98	.37	1,023	26.16	1.75
1927.....	5	.01	.71	36	.85	.50	917	21.70	.34	958	22.67	1.55
1928.....	6	.01	.76	24	.51	.21	818	17.37	.51	848	18.00	1.48
Metals:												
1926.....	71	.19	1.12	421	1.11	.82	12,140	31.69	.47	12,632	32.29	2.41
1927.....	41	.11	.69	425	1.19	.70	8,471	23.65	.44	8,937	24.95	1.83
1928.....	44	.12	.69	403	1.06	.60	8,358	21.89	.38	8,805	23.06	1.67
Packers and tanners:												
1926.....	0	0	0	13	.95	1.62	748	54.47	.70	761	55.41	2.32
1927.....	1	.07	.43	15	1.07	.32	682	48.57	.55	698	49.71	1.30
1928.....	0	0	0	6	.41	.11	873	58.99	.45	879	59.40	5.58
Paper and pulp:												
1926.....	16	.23	1.36	22	.31	.30	2,440	34.63	.51	2,478	35.17	2.17
1927.....	10	.14	.87	20	.29	.33	1,968	28.43	.36	1,998	28.87	.78
1928.....	10	.14	.86	19	.27	.43	1,630	23.24	.35	1,659	23.66	1.64
Petroleum:												
1926.....	34	.19	1.15	184	1.04	.61	3,461	19.58	.30	3,679	20.81	2.07
1927.....	31	.18	1.05	136	.77	.34	2,863	16.17	.33	3,030	17.11	1.72
1928.....	52	.32	1.91	124	.76	.36	2,597	15.95	.24	2,773	17.03	2.55
Power press:												
1926.....	17	.06	.38	291	1.07	.65	6,126	22.58	.27	6,434	23.68	1.30
1927.....	7	.03	.17	263	1.07	.47	4,986	20.34	.25	5,256	21.10	.88
1928.....	10	.04	.23	141	.53	.31	4,386	16.59	.46	4,537	17.12	1.00
Public utilities:												
1926.....	74	.58	3.48	25	.20	.30	4,152	32.51	.41	4,251	33.78	4.18
1927.....	58	.45	2.71	37	.29	.31	3,465	26.93	.42	3,560	27.67	3.44
1928.....	59	.48	2.88	33	.27	.33	2,670	21.69	.35	2,762	22.44	3.55
Quarry:												
1926.....	3	1.60	9.60	5	2.67	2.32	123	65.66	1.09	131	69.93	13.04
1927.....	0	0	0	0	0	0	74	53.99	.78	74	53.99	.78
1928.....	1	.84	5.04	2	1.68	.50	40	33.65	1.20	43	36.17	6.75
Rubber:												
1926.....	8	.06	.34	79	.56	.40	4,231	30.19	.42	4,318	30.81	1.17
1927.....	6	.04	.25	58	.41	.29	3,826	26.81	.38	3,890	27.26	.92
1928.....	10	.07	.40	63	.42	.43	3,263	23.28	.31	3,336	22.47	1.14
Textiles:												
1926.....	1	.01	.08	26	.37	.21	875	12.23	.15	902	12.70	.44
1927.....	1	.01	.09	29	.43	.19	818	12.21	.13	848	12.66	.41
1928.....	4	.06	.34	27	.38	.19	720	10.26	.15	751	10.70	.67
Lumber and woodworking:												
1926.....	15	.29	1.73	77	1.48	1.37	2,639	50.64	1.96	2,731	52.41	5.06
1927.....	6	.12	.73	50	1.02	.66	2,193	44.61	.53	2,249	45.75	1.92
1928.....	11	.22	1.32	58	1.17	1.24	1,949	39.16	.63	2,018	40.55	3.19
Total:												
1926.....	323	.18	1.05	1,766	.96	.63	48,683	26.48	.42	50,772	27.61	2.10
1927.....	240	.13	.80	1,542	.85	.48	40,616	22.42	.36	42,398	23.41	1.63
1928.....	277	.15	.88	1,282	.68	.42	38,313	20.18	.41	39,872	21.00	1.71

Mine Accidents in Mexico, 1925 to 1928

THE Mexican Department of Mines, under the Ministry of Industry, Commerce and Labor, has issued mine accident statistics for the year 1928 which show a marked decrease as compared with those in previous years, according to a report from the American consul, Dudley G. Dwyre, at Mexico City, dated November 5, 1929.

The following table covers fatal and "serious" accidents in the Mexican mining industry for each of the four years, 1925 to 1928. By "serious" accident is meant one causing a loss of more than 15 working days.

NUMBER OF ACCIDENTS AND NUMBER OF 8-HOUR SHIFTS IN THE MINES OF MEXICO, 1925 TO 1928

Year	Number of accidents			Number of individual 8-hour shifts
	Fatal	Serious	Total	
1925.....	378	4,195	27,165	25,426,362
1926.....	269	2,321	27,574	25,005,598
1927.....	227	1,995	26,865	22,942,044
1928:				
Metal mines.....	192	1,250	15,150	15,532,027
Coal mines.....	9	14	675	1,053,738
Mills.....	20	219	1,721	5,390,451
Total, 1928.....	221	1,483	17,546	21,976,216

The department of mines attributes the satisfactory showing for the year 1928 largely to its safety campaign. The department states that while much remains to be done to lessen the number of accidents, the figures indicate what results may be obtained in the future by the continuance of this campaign in which the principal mining companies of the country are cooperating to the fullest extent.

Industrial Accidents in Lima, Peru, 1924, 1926, and 1928

THE Statistical Abstract of Peru for the year 1928 contains official figures showing that the number of industrial accidents which occurred in Lima in 1928 was 2,493, of which number only 8 were fatal.

The following table, taken from this report,¹ gives the number of industrial accidents for the years 1924, 1926, and 1928.

NUMBER OF INDUSTRIAL ACCIDENTS IN LIMA, PERU, 1924, 1926, AND 1928, BY INDUSTRY

Industry	1924	1926	1928	Industry	1924	1926	1928
Agriculture and forestry.....	71	31	184	Textiles and weaving.....	74	167	279
Alcohol and liquors.....	101	147	108	Furniture.....	7	5	45
Pottery and ceramic works.....	26	4	8	Paper and printing.....	31	21	55
Tanneries and shoe factories.....	17	29	37	Government service.....	4	6	7
Electrical.....	621	393	347	Cement fabric.....			30
Railway.....	119	237	258	Tobacco.....	10	1	
Automobile.....	50	52	114	Coal warehouse.....			10
Gas.....	2	4		Glass.....		29	20
Food.....	47	73	111	Cable and telephone.....			13
Metal work and engineering.....	41	29	54	Various.....	156	146	214
Sawmills.....	68	66	165				
Building.....	546	485	434	Total.....	1,901	1,925	2,493

¹ Figures for the years 1924 and 1926 have been taken from the Statistical Abstract for 1926.

WORKMEN'S COMPENSATION

Occupational Diseases and Workmen's Compensation Laws

By ETHELBERT STEWART, UNITED STATES COMMISSIONER OF LABOR STATISTICS

WHEN workmen's compensation laws were first passed by the various States, all sorts of checks and restrictions were written into the laws because employers and insurance companies did not know what such legislation was going to cost. Every attempt to amend or liberalize these laws has to meet the same issue. Few laws as originally passed provided for compensation for occupational diseases. In the first place, the subject was not well understood, and in the second, the friends of such legislation were glad to get even the most conservative and restricted acts passed.

In the gradual liberalization of compensation legislation which has been going on for 10 years or so 17 of our jurisdictions have included compensation for occupational diseases. These are California, Connecticut, District of Columbia, Hawaii, Illinois (in certain employments by special act), Kentucky, Massachusetts (by court decision), Minnesota, New Jersey, New York, North Dakota, Ohio, Porto Rico, Philippines, Wisconsin, and the United States under two acts—the Federal employees' compensation act and the longshoremen's act.

There are three ways of covering occupational diseases in the various laws. One is by listing the specific diseases which are to be held compensable; another is to include all occupational diseases by blanket provisions; and the third is to use the word "injury" instead of "accident" in the compensation act. Most courts have construed "injury" in a sufficiently broad sense to cover any form of injury, while "accident" is construed as specific as to time and place and as a mechanical thing.

The original plan, borrowed from England, was to list specifically in the statute the diseases for which compensation would be paid. England listed six—namely, anthrax, lead poisoning, mercury, phosphorus, arsenic, and ankylostomiasis—but has added a few others in recent years. Germany lists 23 and Switzerland 80 occupational diseases which may be compensated. Of the States having specific lists, Minnesota lists 23 diseases, New Jersey 10, New York 23, Ohio 18, Porto Rico 15. But administrators of compensation laws agree, unanimously I think, that a blanket law covering all occupational diseases is by far preferable to a list, no matter how liberal. A resolution to this effect passed by the Buffalo convention of the International Association of Industrial Accident Boards and Commissions, which is an organization of administrators of workmen's compensation laws, was as follows:

Whereas, The experience of several States, including especially the States of California, Connecticut, North Dakota, and Wisconsin, reliably indicates that

the cost of including all occupational injuries and disabilities is insignificant, and would add not exceeding approximately one per cent to the present insurance cost of accident disabilities: Therefore, be it

Resolved, That this association hereby recommends to the several States and Provinces the inclusion of all occupational injuries and disabilities in their compensation laws, and, it does hereby place itself on record as favoring such legislation.

The wording of this resolution was based upon the fact that the Supreme Court of Massachusetts, in numerous decisions, has laid down the general principle that an injury may be anything that disables a man from work. In the case of *H. P. Hood & Sons. v. Maryland Casualty Co.* (206 Mass. 223; 92 N. E. 329), the court held that an infection which a stableman had received from glanders was as much a bodily injury as though he had received a broken leg or arm by the kick of a horse.

In another case, *Johnson v. London Guarantee & Accident Co.* (217 Mass. 388; 104 N. E. 735), the court held that a claim for lead poisoning would be allowed as for personal injuries even though the word "accident" did not appear in the compensation law. Other cases which have been handed down by the Massachusetts Supreme Court on the subject are as follows:

In re Hurle, 104 N. E. 336.
In re McPhee, 109 N. E. 633.
Doherty's case, 109 N. E. 887.
Madden's case, 111 N. E. 379.
Bergeron's case, 137 N. E. 739.
Gerald's case, 141 N. E. 862.
Sinclair's case, 143 N. E. 330.
Gilson's case, 150 N. E. 183.
Bagley's case, 152 N. E. 882.
Sullivan's case, 164 N. E. 457.
McIsaac's case, 164 N. E. 653.
Green's case, 165 N. E. 120.

Several States have substituted the word "injury" for "accident" in their compensation laws. The following States and jurisdictions have liberalized the compensation laws on the subject of occupational diseases: California, Connecticut, District of Columbia, Hawaii, Massachusetts, North Dakota, Philippine Islands, Wisconsin, and the United States (laws for Federal civil employees and longshoremen and harbor workers).

Now, how extensive is this disability from occupational diseases, and if compensated what will it cost? The number of cases of loss of time and of wages from occupational disease is comparatively small. In Wisconsin, which has a blanket coverage (that is, it compensates all occupational diseases), there were, over a period of eight years, 2,569 cases, or an average of 321 cases per year. This was less than one per cent of the physical industrial accident cases. The total compensation awarded to such cases for the eight years was \$473,921 and the medical care cost \$105,104; this also was less than 1 per cent of the total compensation and medical cost for the period. The average indemnity cost per case was \$185 and the average medical cost was \$41—this for a period covering eight years. The Wisconsin experience for 1928 (not included in the above) was that indemnity cost per case was \$178 and medical cost was \$57 per case. This still comes inside 1 per cent of the total.

WORKMEN'S COMPENSATION

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When Wisconsin first put occupational diseases into its compensation law, the premium rate was increased uniformly, so that an industry that had a 40-cent rate was increased to 41 cents per \$100 of pay roll; an industry or occupation having a \$1.50 rate was raised to \$1.51, etc. This went on for a time, but such a surplus was accumulated that the extra cent was taken off, and now Wisconsin, with a universal coverage, makes no additional assessments on industry for occupational diseases. Ohio, which has a list of 18 diseases, had losses in 1928 equal to 1 cent on each \$100 of pay roll. This included 10 deaths, which of course add enormously to the expense.

The experience of the State of New York, whose law covers a list of 23 diseases, for the year ending January 30, 1929, was as follows: There were 345 awards for occupational diseases. That was approximately one-third of 1 per cent of the total number of compensated cases during that year. The amount of compensation awarded in these 345 cases was in round numbers \$112,000. This was about one-third of 1 per cent of the total amount of compensation awarded in that year. The average award made in these 345 cases was \$325. This included five deaths from lead poisoning and one permanent total disability due to lead poisoning. Excluding these cases, the average award was \$181 per case. Lead poisoning and silicosis account for most of the serious cases.

The question is often asked, If the subject is so insignificant in extent, why bother about it? The answer is, If it is so insignificant in its totality, why oppose it? The matter is not insignificant to those who are its victims.

We think too much in percentages. Each human being, even in this mass production world of ours, is 100 per cent of himself to himself. Each man's wife and babies are to him and to them 100 per cent of all wives and babies. If we prize our individualism so highly as an "ism," let us think of the individual once in a while. Human suffering is personal, not percentual. Loss of wages from one cause is just as serious as from any other cause; and if from conditions inherent in an industry a man loses wages because of an illness contracted by reason of and in the course of his employment he is just as much entitled to compensation as if a flywheel split in two and injured his arm.

Responsibilities of the Medical Profession in Workmen's Compensation Cases¹

TRAUMATIC injuries arising out of industrial accidents had caused litigation in whose adjudication the medical profession had been an important factor for many years both in Europe and this country before the first workmen's compensation law became operative. The attending physician's moral, social, and legal responsibility to the community he served was then, as now, a responsibility he could not escape. There has, during comparatively recent years, been added to those earlier responsibilities of the physician other

¹ Extracts from speech delivered at the eighth annual convention of the Eastern Homeopathic Medical Association, held at Wilmington, Del., Oct. 23-26, 1929, by Dr. Walter O. Stack, president of the Industrial Accident Board of the State of Delaware, and president of the International Association of Industrial Accident Boards and Commissions.

responsibilities growing out of the enactment of workmen's compensation laws due to the fact that such laws have placed upon the employer of labor certain legal obligations to his employees that he was not required to accept when industrial accidents and resultant injuries were matters of legal tort.

Of the many compensatory provisions of the workmen's compensation acts, the one that requires the employer to furnish an injured employee medical, surgical, and hospital services has so increased the moral, social, and legal responsibilities of the medical practitioner that at least some of our medical colleges are providing a special course in industrial medicine and surgery. Unfortunately some members of the medical profession do not appreciate, as do these progressive medical schools, that workmen's compensation laws have created a new field in medicine and surgery that requires special training, a well-equipped workroom and competent help. So necessary is the need of a wider knowledge in this field of medicine and surgery that I believe every medical school should be required to have qualified teachers for the subject. The importance of such a course is obvious, especially when a percentage of those graduating from year to year locate in communities remote from hospitals and professional assistance.

I have advisedly connected medicine with surgery in my recommendations because some of the States have included in their workmen's compensation laws certain occupational diseases, and it is reasonable to assume other States will follow. Hence the imperative need of special work in pathology, bacteriology, etc., along with industrial surgery. If the present 4-year course in medicine does not permit the inclusion of such a course, it is my belief that the medical schools would serve humanity better if they would agree to reduce their student's premedical work to three years and add another year to the medical course.

So convinced is the International Association of Industrial Accident Boards and Commissions, of which I have the honor to be president, of the urgency of a wider knowledge of traumatic medicine and surgery that, at its recent meeting in Buffalo, N. Y., it passed a resolution authorizing its medical committee to formulate a detailed curriculum on industrial medical science, for medical colleges.

There is also a need of pertinent lectures in medico-legal matters. My experience as a member of the industrial accident board of this State convinces me that no medical school should be permitted to turn its graduates loose on society without first giving them legal instructions in matters essential not only to their own professional protection but also to the protection of their patients and their dependents, for industrial accident boards, commissions, and courts have repeatedly held that awards under compensation acts can not rest upon conjectures or surmises; that claimants for compensation must show by preponderance of competent evidence that the disability or death complained of was due to the injury. In other words; gentlemen, you must, when testifying, go farther than to say you think so; you can not rest upon mere possibilities, you must be specific in your diagnostic facts. Therefore you should, in every case of moment, particularly in head injuries, whether recent or not, get from the injured employee a complete history of the case as follows:

(1) Name of employer, and name and address of his insurance carrier.

(2) Name and address of the injured, color, whether married or single, weight of patient if injury is apt to be prolonged, especially if complications are likely to follow; history of the accident, how it happened, and unusual symptoms and physical signs. Do not overlook the importance of getting from the injured his previous history, especially of previous accidents and industrial diseases.

(3) Whether or not he was treated previous to your first seeing him and if so when and by whom; and if in your opinion you can get material information from the first-aid man or physician, by all means communicate with him without delay. If the injury was the result of a fall, ascertain the distance the injured employee fell, upon what he fell, the part of his body which struck the object on which he fell; whether he became unconscious and if so how long he remained unconscious; whether he vomited, and as far as possible the quantity and elements he vomited; whether there was bleeding from the nose, mouth, or ears, and the quantity and color of the blood discharged. If there is ear involvement, note carefully the quantity and color of blood discharged from each ear, and when possible make similar inquiry at the plant's first-aid room or of some competent witness to the accident, because of the aid in differential diagnosis and course of treatment to be followed. Medical authorities tell us that if the traumatic patient has a bloody discharge from one or both ears at the beginning it may be coming from the middle ear alone, due to a fracture or perforation of the drum, but should the discharge continue and become watery, the case is apt to involve a fracture into the middle fossa of the skull with an escape of spinal fluid; furthermore, if the discharge becomes purulent (and many of you know this does occur in many cases) it may be due to infection from without, because the auditory canal contains bacteria, and a culture should therefore be taken so that if intracranial conditions do occur you may know whether the bacteria in the ear and those you found in the spinal fluid are the same. The reference I have made to the vomited contents of the stomach applies largely to cases occurring in States having in their compensation laws certain occupational diseases. A careful check-up of these varying conditions not only will aid in your diagnosis and perhaps in the prevention of infection without subsequent meningitis or brain abscess, even months afterwards, but will also enable you to furnish industrial accident boards and the courts with the facts. Include in your clinical history a record of all outward physical appearances, treatment, temperatures, and progress of the patient from visit to visit, whether or not the patient cooperated with you, or exaggerated his symptoms.

X-ray and laboratory findings should also be included, especially blood, urine, and sputum analyses; and in case of death, particularly in head injuries, if in your opinion there is the least likelihood of the dependent's claim for compensation being disputed by the employer or his insurance carrier you should not only advise the family to have a postmortem but you should be present to see that nothing is overlooked that you had associated with the injury, even if death occurs months after the accident and resultant injury (because no one seems certain as to what may follow these head injuries). Such a procedure,

if followed, may not only save the attending physician embarrassment and criticism in his community but may also establish tenable facts pertinent in predicated the case.

In one head case before our industrial accident board, spinal meningitis developed after the injured man returned to work; in another, frontal sinusitis. Both men died and their families believed that death was chargeable to their injuries. A great deal of medical testimony, expert and otherwise, was taken, preponderance of which denied the allegation. Unfortunately in neither case had there been a postmortem. So I not only call your attention to the importance of causing a postmortem to be held in such cases, but would also impress upon you the importance of withholding your death certificate until after the result of the postmortem is known, in order that you may be able to state therein definite conclusions; otherwise you may have cause to regret your haste.

In testifying give a simple, straightforward, honest statement based upon your personal knowledge of the case and quote, if you wish to quote, only recognized authorities. Do not attempt to qualify as an expert unless your professional work entitles you to such recognition.

Of course, those of you doing industrial work from day to day appreciate as much as I do the importance of getting into your clinical records the information the law demands, but in such a meeting as this there are bound to be some practitioners whose practice in that field of medicine is limited, so to reach them I have generalized in what I have said regarding this particular phase of the subject.

As workmen's compensation laws require the employer to furnish the injured worker reasonable medical, surgical, and hospital services, medicines, and supplies, the industrial accident boards, commissions, and courts have in many jurisdictions held that employees must accept such services unless it can be shown that the services tendered them were of such a character as to destroy in whole or in part the intention of the law. The framers of these humane laws meant that the injured should be given thorough, painstaking examination and adequate treatment. There is no merit in a slap-bang examination and a hustle-bustle treatment. The law, the employer, the employee and his family, the State, and society expect and demand more. These injured men and women are entitled to the same kind of treatment you would give your private patients.

Remember that hasty examinations and a rapid-fire plan of treatment dispels confidence in the minds of the injured, whose nerves are shocked and unbalanced as a result of the accident sustained, sometimes to such an extent that some are not willing to remain under the care of the doctor to whom the employer has sent them. Such a situation is annoying to the employer because of his contractual relations with his insurance carrier and perhaps bad for the injured employee, as he may in changing doctors be denied compensation and told to pay his own doctor's bills unless he can show justification for making the change, and the last is sometimes difficult to do. Personally I do not believe any physician should encourage an injured worker subject to the provisions of the workmen's compensation laws of his State to "swap horses in the middle of the stream," certainly not until he has first talked the case over with the attending physician and the employer, as he may inadvertently be the direct cause of

litigation that could in case of death of the injured employee be serious to his dependents.

Remember, the workmen's compensation laws place upon the employer not only a moral and humane responsibility but a legal financial obligation that does not permit him to play favorites in reaching his decision regarding medical, surgical, and hospital services for his injured employees. The morale of an industrial plant would soon break down if the employer and his insurance carrier did not assume definite medical, surgical, and hospital responsibilities in every compensation case. It is obvious, then, that you can best discharge your moral, social, and legal responsibilities in workmen's compensation cases by advising your patients and their families to accept wholeheartedly the intention of the law. Certainly, a law founded upon such simple justice, as is the workmen's compensation law, deserves your support. As most compensation acts contain definite rates of compensation for specific injuries, your responsibilities in that regard rest in your opinion as to (1) the period of temporary total disability, (2) the period of partial disability, (3) the percentage of loss of earning power, and (4) the percentage of permanent loss of the usefulness or physical function of the members scheduled.

Of course my remarks apply to States whose workmen's compensation laws recognize as compensable only such personal injuries as involve violence to the physical structure of the body and such disease or infection as naturally results directly therefrom when reasonably treated. Some of you are, however, from States that have included in their acts certain occupational diseases. In that case your responsibilities are even greater. But even in States that have not included occupational diseases in their compensation laws you are from time to time called upon to determine whether injuries resulting from industrial accidents aggravated or accelerated preexisting disease or physical weakness. The question then arises as to the responsibility of the accident for "lighting up or aggravating a condition known to be of itself independently progressive." Your answer to such a question can not be based upon conjecture or speculation. Unless you are able to give reasonable medical facts for your conclusions, your testimony can not be considered competent medical testimony and will therefore be of little or no value to the parties in interest or to the industrial accident boards, commissions, and courts.

A moment ago, I briefly referred to your responsibility in cases of temporary total disability and of partial disability in character. No part of your professional work in compensation cases requires a more thorough study of character and the physical elements of the individual than this, as you frequently find one person more susceptible to pain than another. Your responsibility in such cases does not stop with the injured worker and his family. It goes farther; the employer, State, and society are also interested, because one of the fundamental principles of all workmen's compensation laws is that the cost involved shall be charged to the cost of the business of the employer.

Therefore, when you return an injured worker to his employment mentally and physically unfit you may soon find him back in the hospital with a secondary injury; for it is held by our best safety engineers that "physical fitness is generally acknowledged to be an

important element in the prevention of accidents." On the other hand, you can neither afford to let the injured worker become a malingerer nor permit him to remain away from a job you believe would assist you and nature in ultimately returning him to his usual occupation in the industrial world.

In summarizing, I reiterate that your responsibilities in every compensation case you are called to treat are threefold—moral, social, and legal. Morally, in so caring for your cases that no one can rightly charge you with commercializing your profession; socially, in services that will as far as possible restore your patient to his industry so that he and his dependents may not become charges on society; and legally, in following the intention of the law that unnecessary controversies may not arise between employer and employee nor criticism of your failure in furnishing clinical data that industrial accident boards, commissions, and courts have held necessary in adjudicating disputed cases.

Finally, you should familiarize yourselves with the compensation laws of your State in order that your responsibilities to the employer, employee and his dependents, society, and the State may be considered an asset by those in the community.

Recent Workmen's Compensation Reports

Kansas

IN THE annual report of the Commission of Labor and Industry of Kansas for the fiscal year ending June 30, 1929, several interesting tables are presented showing the number of accidents by causes and industry.

TABLE 1.—ACCIDENTS REPORTED DURING THE YEAR ENDING JUNE 30, 1929, BY CAUSE AND BY INDUSTRY

Cause	Number of accidents in specified industry							Total
	Clerical and professional service	Construction	County and municipal	Manufacturing	Mining, metal-lurgy, and quarry	Trade	Transportation and public utilities	
Prime movers.....	2	19		15	27		4	67
Power-transmission apparatus.....	1	24		91	43	1	3	163
Power-working machines.....	8	72		403	96	21	24	624
Other machines.....		8	1	17	18	2	2	48
Hoisting apparatus.....	1	50	3	83	58	8	15	218
Conveyors—belt, chain, bucket.....		6		28	11	1		46
Vehicles.....	13	183	9	249	245	41	70	810
Explosions, electricity, and hot substances.....	8	145	3	323	178	25	71	753
Falls of persons.....	31	373	19	664	274	58	116	1,335
Stepping on or striking against objects.....	6	326	5	378	169	45	49	978
Falling objects.....	8	315	12	479	507	29	108	1,458
Handling objects.....	35	574	29	1,458	757	122	229	3,204
Hand tools.....	10	210	11	676	345	30	79	1,361
Heat prostration, suffocation, gas, freezing.....		17	5	42	21	1	5	91
Horse play—scuffling.....		1	2	12	1	1	3	20
Hurt by mule or horse.....	10	19		33	12	5	6	85
Infection.....	6	54	3	127	57	12	14	273
Foreign matter in eye.....	2	83	3	207	133	7	24	459
Total.....	141	2,479	105	5,285	2,952	400	822	12,193

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TABLE 2.—ACCIDENTS REPORTED DURING THE YEAR ENDING JUNE 30, 1929, BY INDUSTRY

Industry	Accidents resulting in—			Total
	Death	Permanent total or partial disability	Temporary total disability	
Clerical and professional service.....		4	137	141
Construction.....	13	87	2,379	2,479
County and municipal.....	1	8	96	105
Manufacturing.....	22	255	5,008	5,285
Mining, metallurgy, and quarry.....	30	125	2,797	2,952
Trade.....	1	23	385	409
Transportation and public utilities.....	12	38	772	822
Total.....	79	540	11,574	12,193

New York

IN THE November, 1929, issue of the Industrial Bulletin, published by the industrial commissioner of New York State, tables are shown of accident cases closed in the year ending June 30, 1929, by number, cost, and distribution of accidents by extent of disability in chief cause groups.

NUMBER OF ACCIDENTS OCCURRING IN NEW YORK, 1928-29, BY CAUSE AND KIND OF DISABILITY

Cause	Total number of cases	Total number of weeks ¹	Total amount of compensation ¹	Kind of disability				
				Death and permanent total	Permanent partial		Temporary	
					Number of cases	Number of weeks of compensation awarded	Number of cases	Number of weeks of compensation awarded
Handling objects and tools.....	36,101	445,822	\$6,865,248	² 105	5,872	192,710	30,124	148,112
Falls of workers.....	19,197	621,346	7,894,178	³ 288	3,149	200,575	15,760	132,771
Mechanical apparatus.....	15,402	510,461	6,754,845	⁴ 202	5,419	258,687	9,781	49,774
Vehicles.....	8,908	481,776	4,537,585	⁵ 336	1,940	101,052	6,632	44,724
Falling objects.....	6,258	188,781	2,113,989	⁶ 106	1,227	44,632	4,925	38,149
Dangerous and harmful substances.....	5,442	222,948	2,066,070	⁷ 171	453	29,806	4,818	22,142
Stepping on and striking objects.....	4,718	47,397	609,955	19	312	11,911	4,387	16,486
Other or indefinite.....	4,436	104,401	1,280,945	⁸ 51	705	35,302	3,680	18,099
Total.....	100,462	2,622,932	32,122,815	⁹ 1,278	19,077	874,675	80,107	470,257

¹ Including the standard weighting of 1,000 weeks and estimated present value for each death and permanent total disability.

² Includes 7 cases of permanent total disability.

³ Includes 15 cases of permanent total disability.

⁴ Includes 16 cases of permanent total disability.

⁵ Includes 12 cases of permanent total disability.

⁶ Includes 4 cases of permanent total disability.

⁷ Includes 3 cases of permanent total disability.

⁸ Includes 61 cases of permanent total disability.

Vermont

THE biennial report of the commissioner of industries of the State of Vermont for the two years ending June 30, 1928, shows the number of accidents by industry and general cause classification. Summary data from the report are given in the table below.

NUMBER OF ACCIDENTS REPORTED IN VERMONT IN 1927 AND 1928, BY INDUSTRY AND BY CAUSE

Industry and cause	Number of accidents resulting in—							
	Death		Permanent disability		Temporary disability		Total	
	1927	1928	1927	1928	1927	1928	1927	1928
Industry:								
Agriculture.....		1	1	1	51	36	52	38
Quarrying.....	6	1	19	24	970	811	995	836
Logging.....	2	1	6	17	202	159	210	177
Manufacturing.....	2	2	58	44	1,644	1,432	1,704	* 1,480
Construction.....		3	4	15	338	442	342	460
Transportation.....		8	1	1	204	242	205	251
Public utilities.....	2	1	1	3	122	125	125	129
Commercial establishments.....					101	75	101	75
Clerical and professional service.....						1		1
Total.....	12	17	90	1 104	3,638	3,326	3,740	3,447
Cause:								
Machinery.....	1		60	69	607	295	668	364
Vehicles.....	1	8		1	53	20	54	29
Explosions, electricity, fires, and hot substances.....	3	2			142	98	145	100
Poisonous and corrosive substances.....					23	24	23	24
Falls of persons.....	3		3		354	266	360	266
Stepping or striking against objects.....					204	177	204	177
Falling objects, not being handled by injured.....	2	13	7	1	174	293	183	298
Handling of objects.....	1	1	7	14	581	498	589	513
Hand tools, in hands of injured or fellow worker.....			3	11	421	581	424	592
Animals.....	1	1		1	108	101	109	103
Miscellaneous causes.....		1	10	7	971	973	981	981
Total.....	12	17	90	104	3,638	3,326	3,740	3,447

* As given in report; items add to 1,478.

1 As shown in report; items add to 105.

2 As shown in report; items add to 3,632.

3 As shown in report; items add to 3,323.

4 As shown in report; items add to 3,734.

5 As given in report; items add to 307.

6 As given in report; items add to 26.

LABOR LAWS AND COURT DECISIONS

Law Providing Seats for Female Employees not Applicable to Elevator Operators

THE Supreme Court of Michigan on December 3, 1929, in the case of *People v. Wells* held that section 5345 of the Michigan Compiled Laws of 1915 did not apply to the employment of elevator operators.

The section referred to provides that—

All persons who employ females in stores, shops, offices or manufactories, as clerks, assistants, operatives, or helpers in any business, trade or occupation carried on or operated by them, shall be required to procure and provide proper and suitable seats for all such females, and shall permit the use of such seats, rests or stools as may be necessary, and shall not make any arbitrary rules, regulations, or orders preventing the use of such stools or seats at reasonable times. No employer of female help shall neglect or refuse to provide seats as provided in this act, nor shall make any rules, orders or regulations in their shops, stores, or other places of business requiring females to remain standing when not necessarily in service or labor therein.

One Carl S. Wells as president of a company managing the Eaton Tower of Detroit, Mich., was arrested and convicted of failing to comply with an order of two inspectors of the department of labor requiring the furnishing of stools or seats in the elevator cabs for female operators. It was the contention of the defendant that the section of the law under which he was convicted was specific in its coverage and was not applicable to the providing of seats for female employees operating elevators.

The Supreme Court of Michigan held that the judgment against Wells must be reversed and the defendant discharged for the reason that—

The most casual reading of the statute indicates it does not cover a case of this kind. Defendant was not employing females in a store as clerks or otherwise; he was not operating a shop; he was not operating a manufacturing institution; and he was not employing these girls in an office. If the legislature desires to have girls employed in elevators covered by the statute, it may be amended; but the defendant is entitled to any reasonable doubt as to the construction of the statute.

The court held, therefore, that the statute did not plainly cover the case and reversed the judgment of the lower court. (*People v. Wells*, 227 Northwestern Reporter, p. 696.)

Holidays Observed in the United States and Territories

THE following tables show the days, in addition to Sunday, which have been designated as legal holidays by the legislatures of the various States, Territories, etc., and by the United States Congress for the District of Columbia. In the United States there is no so-called "national" holiday. Each State declares for its own jurisdiction the holiday to be observed, either by legislative enactment or by executive proclamation. Only in the District of Columbia can it be truly said that a "national" holiday is observed, since the

Congress of the United States and the President have exclusive jurisdiction. For the most part the sources from which these tables have been compiled are the statutes and session laws of the several States, including the legislative session of 1929.

TABLE 1—LEGAL HOLIDAYS IN THE UNITED STATES AND TERRITORIES

Jurisdiction	New Year's Day (Jan. 1) ¹	Lee's Birthday (Jan. 19)	Lincoln's Birthday (Feb. 12)	Washington's Birthday (Feb. 22)	Good Friday	Memorial Day (May 30)	Davis' Birthday (June 3)	Independence Day (July 4)	Labor Day ¹
Alabama	x	x		x			x	x	x
Alaska	x		x	x		x		x	x
Arizona	x			x		x		x	x
Arkansas	x	x		x			x	x	x
California	x		x	x		x		x	x
Colorado	x			x		x		x	x
Connecticut	x		x	x		x		x	x
Delaware	x		x	x	x	x		x	x
District of Columbia	x			x		x		x	x
Florida	x	x		x	x	x		x	x
Georgia	x	x		x			x	x	x
Hawaii	x			x		x		x	x
Idaho	x			x		x		x	x
Illinois	x		x	x		x		x	x
Indiana	x		x	x		x		x	x
Iowa	x		x	x		x		x	x
Kansas	x		x	x		x		x	x
Kentucky	x	x		x		x		x	x
Louisiana	x			x	x	x		x	x
Maine	x			x		x		x	x
Maryland	x			x	x	x		x	x
Massachusetts	x			x		x		x	x
Michigan	x		x	x		x		x	x
Minnesota	x		x	x	x	x		x	x
Mississippi	x	x		x			x	x	x
Missouri	x		x	x		x		x	x
Montana	x		x	x		x		x	x
Nebraska	x		x	x		x		x	x
Nevada	x		x	x		x		x	x
New Hampshire	x			x		x		x	x
New Jersey	x		x	x	x	x		x	x
New Mexico	x			x		x		x	x
New York	x		x	x		x		x	x
North Carolina	x	x		x		x		x	x
North Dakota	x		x	x		x		x	x
Ohio	x		x	x		x		x	x
Oklahoma	x		x	x		x		x	x
Oregon	x		x	x		x		x	x
Pennsylvania	x		x	x	x	x		x	x
Philippine Islands	x			x	x	x		x	x
Porto Rico	x			x	x	x		x	x
Rhode Island	x			x		x		x	x
South Carolina	x	x		x			x	x	x
South Dakota	x		x	x		x		x	x
Tennessee	x	x	x	x	x	x		x	x
Texas	x			x		x		x	x
Utah	x		x	x		x		x	x
Vermont	x			x		x		x	x
Virginia	x	x		x			x	x	x
Washington	x		x	x		x		x	x
West Virginia	x		x	x		x		x	x
Wisconsin	x			x		x		x	x
Wyoming	x		x	x		x		x	x

¹ First Monday in September.

² Whenever appointed (usually last Thursday in November).

³ Other States also provide by law for an arbor day but do not make it a legal holiday, except in a few cases for school children.

⁴ Whenever appointed.

⁵ Celebrated on April 26.

⁶ Celebrated on the first Friday after the first day of February in some counties, and the first Friday after the first day of April in others.

⁷ Does not affect commercial paper or the making or executing of agreements in writing or interfere with judicial proceedings.

⁸ Celebrated on June 3.

⁹ Celebrated on the last Thursday in November.

Table 1 shows the holidays generally observed throughout the United States, and Table 2 shows the holidays peculiar to each jurisdiction by reason of historical or local interest. Holidays falling on Sunday are usually observed on Monday.

TABLE 1.—LEGAL HOLIDAYS IN THE UNITED STATES AND TERRITORIES—Contd.

Jurisdiction	Colum- bus Day (Oct. 12)	General election day	Armistice Day (Nov. 11)	Thanks- giving Day ²	Christ- mas Day (Dec. 25)	Arbor Day ³	Confederate Memorial Day	Fast Day ⁴
Alabama.....			X	X	X		8 X	
Alaska.....		X	X	X	X			
Arizona.....	X	X	X	X	X	6 X		
Arkansas.....	7 X	X	X	X	X			
California.....	X	X	X	X	X			X
Colorado.....	7 X	X	X	X	X			X
Connecticut.....	X		X	X	X			X
Delaware.....	X	X	X	X	X			
District of Columbia.....			X	X	X			X
Florida.....		X	X	X	X		8 X	
Georgia.....			X	X	X		8 X	X
Hawaii.....		X	X	X	X			X
Idaho.....	X	X	X	X	X			X
Illinois.....	X	X	X	X	X			X
Indiana.....	X	X	X	X	X			X
Iowa.....		X	X	X	X			X
Kansas.....	7 X		X	X	X			X
Kentucky.....	X		X	X	X			X
Louisiana.....	X	X	X	X	X		8 X	
Maine.....			X	X	X			
Maryland.....	X	X	X	X	X			X
Massachusetts.....	X		X	X	X			
Michigan.....		X	X	X	X			X
Minnesota.....		X	X	X	X			
Mississippi.....			X	X	X		8 X	
Missouri.....	7 X	X	X	X	X			
Montana.....	X	X	X	X	X			X
Nebraska.....	X		X	X	X	10 X		X
Nevada.....	11 X	11 X		X	X			
New Hampshire.....	X	X	X	X	X			X
New Jersey.....	X	X	X	X	X			X
New Mexico.....	X		X	X	X			X
New York.....	X	X		X	X			X
North Carolina.....		X	X	X	X		12 X	
North Dakota.....	X		X	X	X			X
Ohio.....	X	12 X	X	X	X			X
Oklahoma.....		X	X	X	X			X
Oregon.....	X	X	X	X	X			X
Pennsylvania.....	X		X	X	X			X
Philippine Islands.....		X		X	X			
Porto Rico.....	X	X		X	X			X
Rhode Island.....	X	X	X	X	X	10 X		X
South Carolina.....		X	X	X	X		12 X	
South Dakota.....		X	X	X	X			X
Tennessee.....		X	X	X	X		8 X	X
Texas.....	X	X		X	X		8 X	X
Utah.....	X		X	X	X	17 X		X
Vermont.....	X		X	X	X			X
Virginia.....		X	X	X	X		19 X	X
Washington.....	X		X	X	X			
West Virginia.....	X	X	X	X	X			
Wisconsin.....		X		X	X			
Wyoming.....		X	X	X	X	20 X		

¹⁰ Celebrated on April 22.

¹¹ Nonjudicial day.

¹² Celebrated on May 10.

¹³ Afternoon only.

¹⁴ Celebrated on May 1.

¹⁵ Celebrated on second Friday in May.

¹⁶ Also designated Arbor Day.

¹⁷ Celebrated on April 15.

¹⁸ Lee-Jackson Day.

¹⁹ Celebrated on May 30.

²⁰ Day set by governor.

TABLE 2.—HOLIDAYS PECULIAR TO EACH JURISDICTION BY REASON OF HISTORICAL OR LOCAL INTEREST

Jurisdiction	Date	Day	Jurisdiction	Date	Day
Alabama.....	Apr. 13..... (1).....	Jefferson's Birthday. Fraternal Day.	Philippine Islands.	Aug. 13.....	Assumption Day. ¹
Alaska.....	Apr. 26.....	Mardi Gras.		Nov. 30.....	Bonifacio Day.
	Mar. 30.....	Seward's Day.		Dec. 30.....	Rizal Day.
Arizona.....	Oct. 18.....	Alaska Day.			Thursday of Holy Week.
California.....	Feb. 14.....	Admission Day.	Porto Rico.....	Mar. 22.....	Emancipation Day.
Colorado.....	Sept. 9.....	Do.		Apr. 16.....	Jose de Diego Day.
District of Columbia.	Aug. 1.....	Colorado Day.		July 17.....	Louis Munoz Rivera's Birthday.
Florida.....	Mar. 4.....	Inauguration Day. ¹		July 25.....	Anniversary of landing of American Troops.
	(3).....	Farmers' Day.		July 27.....	Dr. Jose Celso Barbosa's Birthday.
Hawaii.....	June 11.....	Mardi Gras. ⁴	South Carolina.....		Thursday of Fair Week. ¹⁰
		Anniversary of union of islands by Kamehameha I, 1795.	Tennessee.....	July 13.....	General Forrest's Birthday.
Idaho.....	(6).....	Regatta Day.	Texas.....	Mar. 2.....	Anniversary of Texas independence.
Louisiana.....	June 15.....	Pioneer Day.		Apr. 21.....	Anniversary of Battle of San Jacinto.
	Jan. 8.....	Anniversary of Battle of New Orleans.	Utah.....	July 24.....	Pioneer Day.
	Nov. 1.....	All Saints' Day.	Vermont.....	Aug. 16.....	Bennington Battle Day.
Maine.....	Apr. 19.....	Mardi Gras. ⁴	West Virginia..	June 20.....	West Virginia Day.
Maryland.....	Apr. 19.....	Patriots' Day.			
	Mar. 25.....	Maryland Day.			
Massachusetts..	Sept. 12.....	Defenders' Day.			
	Apr. 19.....	Patriots' Day.			
	June 17.....	Bunker Hill Day. ⁷			
Nevada.....	Oct. 31.....	Admission Day. ⁸			
North Carolina.	Apr. 12.....	Halifax Resolutions Day.			
	May 20.....	Anniversary of Mecklenburg Declaration of Independence.			

¹ October, second Thursday.² Every fourth year.³ October, second Friday.⁴ In cities or towns having carnival associations.⁵ September, third Saturday.⁶ In the Parishes of St. Bernard, Jefferson, St. Charles, St. John the Baptist, and Orleans.⁷ Not a legal holiday, but observed in Boston and suburbs.⁸ Nonjudicial day.⁹ Commemorates the surrender of the city of Manila to the American forces.¹⁰ In counties where the State agricultural and mechanical society holds an annual fair.

Chinese Labor Union Law ¹

BASED upon the summary of principles governing the labor union law adopted by the committee on revision, headed by the Minister of Industry, Commerce, and Labor, and passed at the one hundred and seventy-seventh meeting of the Central Political Council, the Legislative Yuan, at its fifty-first regular meeting, held on September 28 (1929), passed the following labor union law, which is now before the Government for promulgation:

CHAPTER 1.—Organization

ARTICLE 1. Male or female workers of the same occupation or trade with a view to increasing their knowledge, skill, productive power, maintaining or improving their working conditions, or raising their standard of living, may gather together over 100 in number in employment or over 50 out of employment and organize a union in accordance with the present law. The nature of both labor and trade unions shall be defined by separate ordinances.

¹ China. National Government of the Republic. Ministry of Industry, Commerce, and Labor. Bureau of Industrial and Commercial Information. Chinese Economic Journal, Shanghai, November, 1929, pp. 1006-1016.

ART. 2. Any worker is eligible to membership of a certain union who, though belonging to a different trade or occupation, has either one of the two following qualifications: (a) Having been elected officer of the union, and (b) having been worker of the same trade or occupation.

ART. 3. No officers or employees of government organs having to do with administrative, communication, military, and educational affairs, of government-owned industries, of industries pertaining to the army or of public utilities, are allowed to organize a union in accordance with the present law.

ART. 4. The controlling or supervisory organ of a union shall be the Hsien, the municipal or the provincial government at the place in which the union is located.

ART. 5. In promoting a union a delegation of five to nine members shall be elected to file with the official organ in control thereof a petition, signed by the number of members provided for under article 1 of the present law, together with constitution of the union and a statement of the antecedents of each of the delegates in duplicate copies, for official recognition. On receipt of the petition the said official organ shall investigate the case and make a reply in two weeks. In case a revision of the petition or a second investigation of the case is required, the said official organ shall deal with the revised petition or the report on the second investigation in the same manner as with the original petition. Upon obtaining official sanction, the union shall file with the official organ in control thereof within three weeks, a report on the date of its inauguration and the names, addresses, and antecedents of the officers elected. Such a report shall be announced to the public by the said official organ. No union shall be entitled to the privileges and protection provided for under the present regulations, unless it shall have been registered and officially recognized and filed a report referred to above.

ART. 6. Workers of the same occupation or trade shall be able to organize only one union in the same district.

ART. 7. In promoting a union, a preparatory meeting shall be held and a constitution formulated. The passage of the constitution shall require the consent of three-fourths of the promoters.

ART. 8. The following particulars shall be set forth in the constitution of the union: (a) Name of the union; (b) object of its organization; (c) address of the union and the district in which the union is located; (d) qualifications of the members and their rights and obligations; (e) provisions concerning the election, resignation, and expulsion of the members; (f) provisions concerning the officers; (g) provisions concerning the meeting; (h) provisions concerning the membership fee and other financial matters; (i) provisions concerning promotion of the welfare of the members; and (j) provisions concerning the amendment of the constitution.

ART. 9. No amendment to the constitution shall be effective unless it has been approved by the official organ in control thereof.

ART. 10. A labor or trade union is a juristic person who is prohibited from being engaged in business for gain.

ART. 11. A union shall have a board of directors to be elected from among its members. In case of necessity, nonmembers are eligible upon due approval by the official organ in control thereof. The directors shall manage the affairs of the union and act as its repre-

sentatives when dealing with outside people. As representatives the power of the directors shall be limited to such extent as not to oppose the good intentions of a third party.

ART. 12. If, in performance of their duty, the directors of a union or their agents do damage to other persons, the union shall also be held responsible for such damage. If, however, in the interest of working terms of the members, the directors or their agents encourage the members to take a joint action or restrain a certain action in such a manner as to cause damage to the employers, such damage is not subject to the provisions of the present article. The union is not responsible for the personal conduct of its members.

ART. 13. A general meeting of the unions' members or their representatives shall be called to discuss and pass upon any of the following: (1) Change or revision of the constitution of the union; (2) estimate of the receipts and expenses of the union; (3) confirmation of business reports and financial statements submitted to the meeting for approval; (4) maintenance or improvement of working conditions of the members; (5) appropriation, control, and disposal of the foundation fund of the union; (6) promotion of welfare of the union; (7) organization of an association of unions or the union's affiliation with, or dissociation from, such an association; (8) dissolution, amalgamation, or division of the union.

ART. 14. A union may, in pursuance of the provisions of its constitution or of a resolution passed at one of its general meetings, appoint a supervisory board to audit and supervise its books and accounts, inquire into the condition or the progress of affairs, and supervise officers of the union in the performance of their duties. The supervisors must be appointed from among the members of the union.

CHAPTER 2.—*Duties and functions of a union*

ART. 15. The duties and functions of a union shall be as follows:

(a) The union shall be able to formulate, cancel, or revise the stipulations concerning the organization of the union, but such formulation, cancellation, or revisions shall not be effective unless approved by the official organ in control thereof; (b) the union may recommend its members for employment and may also establish an employment bureau; (c) the union may organize a savings bank, initiate a labor insurance system, or establish a clinic or a home for children; (d) the union may organize cooperative societies for purposes of production, consumption, purchase, supply of credit, housing, etc.; (e) the union may provide vocational education or other kinds of education suiting the working class; (f) the union may establish a library or a reading club; (g) the union may issue printed matter; (h) the union may allow its members to organize clubs, societies for promotion of friendly feelings and fellowship, and similar organizations; (i) the union may settle by arbitration disputes between its members or between itself and another union; (j) the union may act as arbiter in settling disputes between the employers and the employees; (k) the union may submit its views to the administrative, judicial, or legislative organs concerning the enactment or abolition of laws and ordinances concerning labor, and it may also answer the inquiries of the administrative, judicial, and legislative organs concerning issues pertaining

thereto; (l) the union may make investigations regarding the financial and living conditions of the families of the laborers and their employment or lack of it and compiled labor statistics; (m) the union may carry out any measure which serves to increase the working efficiency of its members or to further their interest in work. If and when a union fails to carry out any of the measures provided for above or any measures relating to mutual help and welfare of the members as stated in its constitution, the official organ in control thereof may appoint officials to help the union carrying out such measures whenever the former deems it necessary.

ART. 16. A union organized by the workers engaged in such work as is provided for under article 3 of the present law has no right to incorporate itself with other unions.

ART. 17. A union may collect fees from its members but the amount of membership fee shall not exceed \$1¹ for each member and the annual subscription shall not exceed 2 per cent of each member's income. Appropriation or assessment of a foundation fund, a special fund, or a share fund may be done after permission has been obtained from the official organ in control thereof.

ART. 18. A union should render a report on its financial condition to its members every six months. With the consent of more than one-tenth of its members, the latter may appoint delegates to investigate into the financial condition of the union.

CHAPTER 3.—*Supervision*

ART. 19. A workman shall only be able to become a member of a union of the same occupation or trade with which he is identified.

ART. 20. A union shall not compel any person to become a member or prevent any person from resigning his membership. A union shall not reject any applicant for membership for which he is qualified according to law and the constitution of the union, nor shall it admit to its membership any person who is disqualified according to law and its constitution. A union shall not interfere with the work of nonmembers.

ART. 21. A member of a union may resign his membership at any moment. In case the constitution of the union requires previous notice for such resignation, the retiring member must give notice. The period for such notice shall not exceed one month.

ART. 22. If any fine is to be imposed upon any of its members by a union, the amount shall not exceed three days' wages of the member. A union shall not expel any of its members without good reason and without the consent of more than two-thirds of a members.

ART. 23. In case of dispute between the employers and the workmen, no strike shall be declared unless attempts have been made to settle the dispute by arbitration and the case has been referred to a general meeting of the union, at which more than two-thirds of its members have voted by secret ballot in favor of the strike. During a strike the union can not commit any act which disturbs public order, nor can it do any damage or injury to the person or property of the employers or others. The union can not declare a strike in demand

¹ One Mexican dollar equals approximately 50 cents U. S. currency.

for its members for an increase of wages which would bring the total to more than the standard wage rate. The Government workers referred to under article 3 of the present law can not declare a strike.

ART. 24. In case of any change in the constitution or in the board of directors or officers, an immediate report to that effect must be filed with the official organ in control thereof and the latter shall announce such change to the public in two weeks' time. Pending such official announcement, such changes shall not be effective to a third party.

ART. 25. After a union has been registered with the officials, it should present to the official organ in control thereof two blank copies of its membership list and financial account to be sealed (and returned) by the said official organ. The same sealing shall be done whenever the old copies are replaced by new ones. Of the two copies one shall be kept in the union's office and the other submitted to the official organ in control thereof. In the membership list such particulars shall be set forth as the names of the members, the total number of the members, the date of their admission, their occupational addresses, their being employed or otherwise, death, injury, and change of address. In the financial account each item of the receipts and expenditures shall be numbered and accompanied with a voucher or receipt. The items may be numbered in another book with the vouchers or receipts attached thereto. If the official organ in control thereof considers it necessary, it may order the union to engage a public auditor to audit the books.

ART. 26. In the sixth and the twelfth month of every year the union must submit papers or reports concerning the following particulars to the official organ in control thereof. When, however, the latter deems it necessary, it may order the union to submit such papers or reports at any time: (a) The names, addresses, and antecedents of the officers of the union, (b) the membership list, (c) the financial accounts, (d) a record of the affairs done by the union, and (e) a report on any dispute or trouble and its settlement.

ART. 27. The officers or members of a union are prohibited from committing any of the following acts: (a) To lock up a factory or a business establishment, (b) to seize or destroy the goods or assets of a factory or a business establishment, (c) to assault or put under arrest any workman or employer, (d) to compel the employers to employ no other men but those recommended by the union, (e) to carry arms while in assembly or parade, (f) to exact contributions from the workmen, (g) to order its members to commit sabotage, and (h) to collect unauthorizedly any commission or levy.

ART. 28. The official organ in control thereof may nullify any vote or resolution passed by the union contrary to the laws and orders of its own constitution.

ART. 29. If the constitution or regulations passed by a union are contrary to the laws and orders, the official organ in control thereof may order the union to revise the same.

ART. 30. If a union is not satisfied with the treatment of the officials in connection with the cases referred to under the previous two articles, it may make an appeal, which must, however, be made in 30 days after such treatment has been accorded.

CHAPTER 4.—*Protection*

ART. 31. An employer or his agent shall not dismiss an employee, reject an applicant for work, or accord other unfavorable treatment to a person because of his affiliation with the union either as its officer or member.

ART. 32. An employer or his agent shall not demand their employees as a condition of employment to refrain from doing their duty to the union or to enroll as members of the union or to resign their membership.

ART. 33. An employer or his agent shall not dismiss any of his employees when a dispute between the employer and the employees is being settled by arbitration.

ART. 34. A union shall be exempt from the payment of income tax, business tax, and registration fee.

ART. 35. In case of insolvency of a debtor to a union, the union shall have a prior claim on the assets of the debtor over other creditors.

ART. 36. The following properties owned by a union are not subject to confiscation: (a) Premises, school, library, reading room, club premises, hospital ward, clinic, home for children, and the movable and immovable property of cooperative societies; (b) the foundation fund of the union and the workmen's insurance fund.

CHAPTER 5.—*Dissolution*

ART. 37. A union may be dissolved by the official organ in control thereof under any of the following circumstances: (a) Lacking the essential requirements for its existence, (b) committing unlawful acts of a grave nature, and (c) disturbing peace and order or committing acts detrimental to the welfare of the public.

ART. 38. Besides its dissolution by official orders as is provided for under the foregoing article, a union may declare itself dissolved for or by any of the following reasons or measures: (a) By a resolution passed at a general meeting, but in this case the permission of the official organ in control thereof shall be obtained; (b) occurrence of any incident justifying its dissolution as is provided for under its constitution; (c) bankruptcy; (d) lacking the essential number of members; (e) the union's division into or amalgamation with some other unions.

ART. 39. The division or amalgamation of a union must be approved by more than one-half of the members of the unions concerned and also by the official organ in control thereof.

ART. 40. The union which continues to exist or the newly founded union after amalgamation shall succeed to the rights and obligations of the union which becomes defunct as the result of the amalgamation. The new union coming into existence as a result of division from its parent union shall succeed to the rights and obligations of its parent union, which is either defunct or existing. The particulars concerning the succession of such rights and obligations must be decided on at the time when the question of division is decided and must be approved by the official organ in control thereof.

ART. 41. Before the division or amalgamation of a union public notice shall be given to its creditors, asking them to file their claims within a certain time limit (of one month). To the creditors whose

names or addresses are known to the union individual notice shall be given. If the creditors file their claims within the stated time limit, the union can not divide or amalgamate before discharging its liabilities or providing adequate guarantee therefor. If a union is divided or amalgamated in breach of either of the two conditions just referred to, its creditors may still advance claims.

ART. 42. With the exception of dissolution by official orders, any union on being dissolved must report to the official organ in control thereof the reason and the date of its dissolution.

ART. 43. With the exception of dissolution owing to division, amalgamation, or insolvency, any union on being dissolved must immediately go into liquidation, which shall be carried out in accordance with the provisions regarding the liquidation of a juristic person under the civil law.

ART. 44. After the dissolution and liquidation of a union, the remaining portion of its assets shall be disposed of according to the provisions under its constitution or any resolution passed at a general meeting of the members of the defunct union. In the absence of either, the remaining portion of the assets shall be returned to the association of unions with which the defunct union was affiliated. In case the defunct union had no such affiliation, the property shall be returned to the local self-government body of the place where the office of the defunct union was situated.

CHAPTER 6.—*Association with other unions*

ART. 45. For the purposes of increasing knowledge, skill or productive capacity of its members or of carrying out some cooperative business, a union, with the permission of the official organ in control thereof, may, with other unions of the same trade or occupation, organize an association of unions. In organizing such an association a general meeting shall be held of the members of the unions concerned to formulate the constitution for the association, which must be submitted to the official organ in control thereof for approval. The association shall be subject to, in addition to the two articles just referred to, the provisions concerning a union under the present law.

ART. 46. No association of unions shall have any connection with a foreign labor union unless permission has been obtained from the Government.

CHAPTER 7.—*Punishment*

ART. 47. If an officer or a member of a union commits any of the acts provided for under article 27 of the present law, he shall be liable to a fine of not exceeding \$200; but if the act constitutes a breach of the criminal law, he shall be punished according to the provisions under criminal law.

ART. 48. If an employer or his agent commits any act in breach of the provisions under article 31 of the present law, he shall be liable to a fine of not exceeding \$300.

ART. 49. If an employer or his agent dismisses workmen in breach of article 32 of the present law, he shall be liable to a fine to be assessed at the rate of between \$10 and \$100 for each workman discharged.

ART. 50. A director of a union shall be liable to a fine of not exceeding \$100 if he commits any of the following acts: (a) Failing to report

or to report falsely on the particulars provided for under articles 22, 24, 42, and 51 of the present law; (b) committing acts in breach of article 25 or against the order provided for under article 29 of the present law; and (c) bringing about or assisting in the division or amalgamation of a union contrary to the provisions under article 41 of the present law.

CHAPTER 8.—*Annex*

ART. 51. Unions which have been founded previous to the enforcement of the present law should register themselves according to the provisions under article 5 of the present law in two months after the enforcement of the present law.

ART. 52. If two unions of the same trade have existed in the same district before the enforcement of the present law, they shall be amalgamated in two months after the enforcement of the present law.

ART. 53. The date for the enforcement of the present law shall be fixed by a special order.

COOPERATION

Development of French Cooperation Since 1918

AN ARTICLE in a recent issue of *Revue des Études Coopératives*¹ summarizes the situation of the consumers' cooperative movement in France since 1918. According to the article, the high cost of living brought many new members into the cooperative societies, so that from 1918 to 1920 the membership rose from less than a million and a half to nearly two million and a half. The following table shows the development of the movement since 1913:

DEVELOPMENT OF CONSUMERS' COOPERATIVE SOCIETIES IN FRANCE, 1913 TO 1928¹

Year	All cooperative societies				Regional unions (development societies)					
	Number of societies	Number of members	Sales		Number	Number of shops	Membership	Sales		Paid-in capital
			Actual amount (thousands)	Real sales ² (thousands)				Actual amount (thousands)	Real sales ² (thousands)	
			Francs	Francs				Francs	Francs	Francs
1913.....	2,980	864,922	317,000	317,000						
1918.....	2,362	1,321,562	641,000	275,000						
1920.....	4,043	2,498,449	1,839,000	462,000	47	1,792	404,196	397,000	100,000	24,556,447
1922.....	3,840	2,329,869	1,747,000	520,000	47	2,317	504,559	432,000	128,000	37,683,420
1924.....	3,558	2,152,702	2,144,000	477,000	48	2,554	567,680	579,000	129,000	44,885,897
1926.....	3,500	2,202,779	2,935,000	502,000	47	2,543	568,161	780,000	133,000	49,567,978
1927.....	3,388	2,212,132	3,302,000	576,000	50	2,872	616,251	965,000	168,000	56,724,558
1928.....	3,513	2,285,221	3,552,883	-----	52	3,181	677,374	1,107,000	195,000	66,067,353

¹ Data are from annual reports of the national federation for 1922, 1926-27, 1928, and 1929.

² On basis of retail prices.

As the table shows, the gain made from 1918 to 1920 apparently did not continue. The number of societies declined from 4,043 in 1920 to 3,840 in 1922, and the membership fell to 2,300,000. The declines were due to several reasons. The report points out that many weak societies failed during the depression of 1920 and 1921 and others amalgamated.

At the same time a new factor, the "development society," was arising in the cooperative movement, a manifestation of the opinion held by leaders of the movement that the increasing centralization of private business must be met by like measures in the cooperative movement. By 1920 the influence of these development societies began to be felt. These societies have been formed as part of the policy adopted by the National Federation of Consumers' Coopera-

¹ *Revue des Études Coopératives* (Paris), July-September, 1929, pp. 427-433: "Le mouvement coopératif français depuis 1918."

tive Societies. At first they were simply fusion societies—societies formed by the amalgamation of one or more small societies in a given district. Little by little their character changed, and their policy as well. They began to establish branches throughout the district, and according to one French cooperative authority, even in places where there had previously been no cooperators.²

This movement of amalgamation and concentration has continued up to the present time, and the total number of societies in France has shown a continuous decrease. As the author points out, however, this does not indicate a loss in the movement, but rather a gain, resulting as it has from the combination of weak and perhaps even competing societies in a locality.

The membership shows a loss of nearly 300,000 persons from 1920 to 1927. The writer thinks, however, that this loss is more apparent than real. Previously many societies carried on their membership lists the names of inactive members, persons who had long since disappeared, moved away, etc. All of these have now been stricken from the lists. The writer is of the opinion that in reality the membership has remained about stationary, ranging around 2,200,000.

Generally only the heads of families are members of cooperative societies. Counting the average French family as consisting of man, wife, and two children, then the "cooperative population" numbers about 9,000,000 persons, or about 22 per cent of the population of the entire country. In addition many persons patronize the cooperative store without becoming members of the society. Also, according to the author, the whole community benefits in prices by the very fact of the existence of the cooperative store there. A study made by the League of Nations in 1926³ showed that the cooperative movement is a very effective influence in keeping down retail prices in European countries, including France. This very influence, the author of the report under review thinks, is the reason for the continuance of the cooperative membership at the same level; since the nonmembers share in the lower prices forced by the presence of the cooperative societies, they do not bother to join the movement.

No attempt was made in the table to convert the French into United States currency, because of the wide fluctuations in the exchange rates in the years covered. The column of "real sales," i. e., the money sales adjusted in relation to the retail price index number, shows that there has been a decided increase in annual sales, even over 1920.

As the author puts it, the table shows "a rapid progress of French cooperation from the period before the war to 1920; from 1920 to 1927, progress still, but more slowly."

A rather phenomenal development is shown in the regional societies. The apparent membership of the whole number of societies fell by approximately 300,000 from 1920 to 1927, while from 1920 to 1928 that of the development societies increased 273,000. "That is to say, the isolated cooperatives have seen their forces diminish by more than half a million between these two dates." Again, while total real sales

² Poisson, Ernest: *La Politique du Mouvement coopératif français*. Paris, Les Presses Universitaires de France, 1929, p. 58.

³ League of Nations. Economic and Financial Section. C. E. I. No. 11: Results of certain of the inquiries for instituting a comparison between the retail prices in private trade and those of distributive cooperative societies. Geneva, 1926. (An account of the findings of this study was given in the *Labor Review* for July, 1927, pp. 63, 64.)

increased 114,000,000 francs, those of the regional unions accounted for 68,000,000 francs of this. It appears then, that the real progress is being made by the centralized societies and that, according to the writer, the small societies must either become a part of the development society of their district or lose out altogether.

Poisson is of the opinion that the reason why many of the small societies have been able to keep going thus long is that they often carry many lines of goods—groceries, bakery products, shoes, dry goods, etc., while as yet the development society has specialized along some one line.⁴

Cooperative Societies in Great Britain, 1927 and 1928

Industrial Societies

DATA showing the development of cooperative societies in Great Britain registered under the industrial and provident societies act, which are required to make annual reports to the Chief Registrar of Friendly Societies are given in the November, 1929, issue of the Ministry of Labor Gazette (London). These returns show that from 1927 to 1928, the membership increased by 289,000, the paid-in capital by \$67,834,143, and the annual business by \$37,583,930. During the three years 1926 to 1928 nearly 1,000,000 new members have joined the cooperative movement. This influx the report attributes largely to intensive membership drives and the increasing extension of credit through so-called "mutuality clubs."

Some 233,300 persons are employed by the cooperative movement. This figure does not include native labor employed abroad, as for instance, on the tea plantations owned jointly by the English and Scottish cooperative societies.

The table below shows the details for certain types of societies and for all types combined:

TABLE 1.—DEVELOPMENT OF COOPERATIVE SOCIETIES IN GREAT BRITAIN, 1927 AND 1928

Type of societies	Number of societies		Number of members		Paid-in capital	
	1927	1928	1927	1928	1927	1928
All types.....	1, 472	1, 454	5, 569, 000	5, 858, 000	\$801, 176, 762	\$869, 010, 905
Retail consumers'.....	1, 314	1, 293	5, 520, 000	5, 807, 000	561, 973, 687	608, 385, 498
Wholesale.....	2	2	* 2, 007	* 1, 979	216, 802, 575	237, 154, 278
Workers' productive.....	89	88	29, 658	30, 732	9, 976, 325	10, 229, 383

Type of societies	Annual business		Value of goods manufactured		Dividends on patronage	
	1927	1928	1927	1928	1927	1928
All types.....	\$1, 515, 914, 800	\$1, 553, 496, 730	\$392, 864, 471	\$397, 614, 643	(b)	(b)
Retail consumers'.....	964, 408, 175	1, 010, 538, 789	184, 475, 160	188, 066, 214	\$87, 499, 670	\$93, 358, 936
Wholesale.....	509, 096, 410	501, 291, 036	174, 855, 369	174, 839, 607	(b)	(b)
Workers' productive.....	17, 509, 667	18, 336, 972	16, 646, 433	17, 113, 563	-----	-----

* Includes employees of Scottish Cooperative Wholesale Society in addition to number of affiliated societies.

* No data.

⁴ Op. cit., p. 61.

The figures given for wholesale societies cover only the English and Scottish societies. The returns of the English society show an increase in sales amounting to $6\frac{1}{4}$ per cent. Those of the Scottish society show a decrease, but this was due entirely to the fact that this society changed the date of closing the books, so that its report covers only 45 weeks. On the basis of a full year, its 1928 sales showed an increase of $6\frac{1}{2}$ per cent as compared with those of 1927.

The workers' productive societies are found in such industries as the manufacture of clothing; soap, candles, and starch; textiles; farming and dairying; food and tobacco; mining and quarrying; building and wood-working; paper and printing; metal and engineering; and certain miscellaneous industries, including transport.

Some retail societies still operate farms, but their number, it is stated, has been reduced in recent years "owing to the difficulties experienced and heavy losses sustained, which in many instances have seriously reduced the surplus earned by the ordinary trading departments." There are 124 retail societies still engaged in farming; these had a total area of 43,000 acres, and an invested capital of \$9,830,330. In 1928 the farming operations resulted in a net loss of \$481,784. Only 20 of the 124 societies showed any profit from the farms.

Agricultural and Fishery Societies

IN CONTRAST to the tendency of the industrial societies, agricultural cooperation, which showed some expansion during and immediately after the war, has since declined. This is brought out by data in the December, 1929, issue of the Ministry of Labor Gazette, compiled from the reports of these societies to the Chief Registrar of Friendly Societies.

Since the peak year, 1920, the figures show, there has been a decrease of 32 per cent in the number of agricultural trading societies and of 22 per cent in their membership. "Many societies, including some of the large county farmers' associations, bacon factories, and other societies engaged in the disposal of produce, have found themselves unable to obtain further working capital or credit, and have been compelled to wind up."

The societies in this group are classified as "requirement societies" which deal in farm supplies; produce societies, which are chiefly farmers' marketing or fish marketing organizations; and service societies, which supply their members with some service connected with agriculture. The table below gives summary figures for the three types of societies in the agricultural and fishery group. Like the data for the industrial societies, these figures cover only Great Britain.

TABLE 2.—DEVELOPMENT OF AGRICULTURE AND FISHERY SOCIETIES IN GREAT BRITAIN

Type of society	Number of societies		Number of members		Paid-in capital: 1928 ¹	Annual business	
	1927	1928	1927	1928		1927	1928
Requirements.....	421	395	90,205	87,217	\$9,816,237	\$39,375,825	\$42,423,957
Produce.....	293	287	36,273	38,078	5,141,822	27,739,585	34,760,845
Service.....	888	862	165,556	164,004	(²)	(²)	(²)
Total.....	1,602	1,544	292,034	289,299	14,958,059	67,115,410	77,184,802

¹ No data for 1927.

² No data.

Status of Cooperation in Turkey

ONLY within the past few years has it been possible to speak of a cooperative movement in Turkey, according to an article in the November, 1929, issue of the Review of International Cooperation.

The oldest Turkish cooperative society is the Fig Growers' Society of Aidin, in Asia Minor. This society is less than 20 years old, and as a result of the successive wars in which the country has been involved has been inactive at least a quarter of that time. As its name implies, it is an agricultural association. It was founded to protect the fig growers from the exploitation by the exporters who were organized into a combine. The society began by selling the product of its members on the Smyrna market. As its business extended, the society began also to do an export business and now handles not only the product of its members but also figs bought from nonmembers in the interior of the country. It has had considerable success in the last three years.

It is interesting to note that this society, like many of the farmers' marketing societies in the United States, makes use of the marketing contract, by which the member binds himself to deliver to the association all of the crops of a specified kind raised by him during the period of the contract. "Every member joining the society has to declare before a notary the extent of his land and his average annual yield of figs, and admit the right of the society to distrain upon his property if he fails to keep his contract with it."

The share capital which the member must pay into the society is based upon the average annual crop, and may be paid in five annual installments. Should the member resign from membership before his shares are fully paid, he forfeits to the society the amounts already paid.

When the crop is delivered to the society it advances to the members 70 per cent of its estimated value, the other 30 per cent being retained until the end of the season as a guaranty against possible losses in marketing. The society is financed to some extent by loans from the National Bank of Aidin, at a rate of 12 per cent. It is pointed out that money lenders' rates would average 70 per cent or more.

That this is a progressive society is evidenced by the fact that from 10 to 20 per cent of the reserve is used each year for educational and social activities.

The other forms of cooperative societies have not been particularly successful. There are, it is stated, some 30 societies but not all are genuinely cooperative, "and the majority are not working well." It is remarked, in this connection that "to the working population of Asia Minor, socially backward, uneducated, and burdened with usury, cooperation presents difficulties which for the time outweigh its advantages." The experience of India, with like conditions, would seem to indicate that Turkey might benefit from cooperative credit societies, and indeed the report does state that in recent years some attention has been given to the formation of cooperative credit societies. The article under review does not, however, state what degree of success has attended the credit movement.

The Fig Growers' Society has been urging the cotton and raisin growers to form organizations similar to its own. The fig society plans to change its organization and become a regional union of producers' societies, and will then carry on systematic educational supervisory work. It has already applied for membership in the International Cooperative Alliance.

Notes on Cooperative Developments

SAVINGS through cooperation.—The great savings possible through cooperation were pointed out by the manager of the Farmers' Union State Exchange at Omaha, at the convention of the Farmers' Educational and Cooperative Union of America, held in Omaha late in November, 1929.¹ He pointed out that the exchange (a cooperative wholesale society which also operates some 10 retail branches) has in the first 10 months of this year done a business of \$2,050,000, with every prospect of attaining \$2,250,000 for the full year. Last year it returned to its members in patronage rebates \$12,000. This year, because of income-tax exemption, from \$30,000 to \$35,000 will be so distributed. The exchange is acting as the buying agent for 46 local gasoline and oil associations. It saves its members some \$2 per ton on coal. Mr. McCarthy continued: "The saving on grain made by cooperative elevators is around 5 cents a bushel. The insurance company saves 50 per cent of the cost of insurance. By cooperative buying, 5 to 20 per cent can be saved on the cost of supplies. Add to these savings those made by the creameries, our livestock marketing, and our terminal grain marketing, and the total amounts to magnificent farm relief."

The National Confederation of Cooperative Societies was established in Chile on August 6, 1929, according to the November 11, 1929, issue of Industrial and Labor Information (Geneva). Its headquarters will be in Santiago, and its purposes will be to unify the movement and to supervise the enforcement of the cooperative law of November 30, 1924, which covers consumers' cooperative societies, building societies, and cooperative credit organizations. Ten societies participated in the formation of the confederation.

The new body is endeavoring to secure an amendment to the housing law allowing greater facilities to the cooperative building societies.

Treatment of cooperative societies in Germany.—The cooperative societies in Germany are faring worse under the present government than they did under the old monarchical régime, according to an article in the November, 1929, issue of the Cooperative Review (Manchester, England). A cooperator, who is also a member of the Reichstag, declared before that body that "under the most reactionary despotism German legislation and justice were not more hostile to

¹ Nebraska Union Farmer, Omaha, Nov. 27, 1929.

consumer cooperation. Although to-day all parties seem to be moving to the left, * * * in reality the middleman is the spoiled darling of politicians of all shades, and the cooperative movement is the fifth wheel on the wagon." Various discriminations are complained of—in the courts, in suppression of the societies' right to freedom of speech, in their being forced to pay membership dues to chambers of commerce whose interests are directly opposed to those of the cooperative movement, in regard to imposition of taxes, and in regard to pressure against individual members.

Campaign against trusts by Scandinavian cooperative societies.—The wholesale societies in the Scandinavian countries have united to organize a campaign against industrial trusts. The Swedish Cooperative Union has already had encounters with combines in various fields—the manufacture of margarine, galoshes, flour, and sugar—in which it has been uniformly successful, setting up its own enterprise to supply the commodity. It will, of course, be represented in the new move, while the Danish Cooperative Union, which was the prime mover in the new step, has already decided that the whole surplus from last year's trading, amounting to some 2,000,000 kroner (\$536,000), shall be devoted to the proposed campaign.²

² Data are from International Labor Office, Cooperative Information No. 13 (97), 1929

WORKERS' EDUCATION AND TRAINING

Activities of Federal Board for Vocational Education, 1928-29

THE annual report of the Federal Board for Vocational Education for the fiscal year ending June 30, 1929, states that satisfactory cooperative relations continued between the Federal board and the 48 State boards and the Hawaiian Territorial board. The vocational education plans of the States have for the most part now received the official approval of the Federal board for 5-year periods. According to the report the State plans which are at present effective show a decided improvement as compared with earlier schemes.

During the period under review the Federal board issued 8 bulletins dealing, respectively, with the following subjects: Trade and industrial education; home economics education; effectiveness of vocational education in agriculture; vocational rehabilitation of the disabled; vocational education in agriculture; training teachers of vocational agriculture in service; Fifth National Conference on vocational rehabilitation of disabled persons; and granite cutting. In addition the Federal board issued 2 monographs and 28 mimeographed reports and made investigations in different fields of vocational education.

The so-called George-Reed Act, approved February 5, 1929, makes it possible to develop in the States more comprehensive vocational educational programs along the lines of home economics and agriculture and for the Federal board to give additional special service to the States in the interest of such development. Up to July 1, 1929, the board had only made plans to meet its further responsibilities under the new measure.

Vocational education programs are financed from Federal funds, State funds, and funds provided by local communities. The ratio of State and local funds per Federal dollar of expenditure was as follows in the years specified: For 1925-26, \$2.54; for 1926-27, \$2.65; for 1927-28, \$2.77; and for 1928-29, \$2.99, the ratio in this last fiscal year ranging from slightly over \$1 in a few of the smaller or less populous States to \$7.57 for Massachusetts. The expenditure from Federal funds for the fiscal year ending June 30, 1929,¹ was \$6,878,530 and from State and local funds \$20,595,776, making a total of \$27,474,306, which was an increase of \$1,758,546 over the preceding year. Some of the items of the combined Federal, State, and local expenditure in 1928-29¹ were—

Kind of education	1928-29	Increase compared with preceding year
Vocational agricultural education-----	\$8, 418, 981	\$810, 068
Vocational trade and industrial education, not including part-time general continuation schools-----	7, 578, 751	384, 753
Trade and industrial part-time general continuation schools-----	5, 167, 960	341, 302
Vocational home economics education-----	3, 903, 119	181, 987
Teacher training-----	2, 396, 572	37, 527

¹ Provisional figures subject to final audit of State accounts.

The number of reimbursement units federally aided in 1928-29 as compared with the number in the preceding year is reported as follows:

Kind of school	1928-29 ¹	Increase or decrease compared with preceding year
Agricultural:		
Evening.....	1, 831	+493
Part-time.....	337	-18
All day.....	3, 788	+235
Day unit course.....	577	+63
Trade and industrial:		
Evening.....	946	+36
Part-time—		
Trade extension.....	281	+19
General continuation.....	574	-15
All day.....	403	+38
Home economics:		
Evening.....	957	+29
Part-time.....	103	+26
All day.....	1, 011	² -149

¹ Figures are provisional subject to final audit of State accounts.

² In 1929 in certain States the Federal funds for home economics were distributed in larger sums to fewer schools.

The enrollment in public vocational schools organized according to State plans approved by the Federal board, both federally aided and not federally aided, totaled 1,047,957 in 1928-29—an increase of 48,926 over the enrollment for the previous year. In 1928-29 the pupils enrolled in vocational courses in the federally aided schools numbered 886,830, an increase of 28,374 over 1927-28. There was also an increase of 1,365 teachers of vocational courses in such schools for 1928-29 as compared with the preceding year as shown below:

Sex of pupils and teachers	1928-29	Increase or decrease compared with preceding year
Pupils enrolled:		
Males.....	¹ 538, 572	+46, 114
Females.....	348, 258	-17, 740
Total.....	886, 830	+28, 374
Teachers:		
Males.....	15, 299	+1, 632
Females.....	6, 845	-267
Total.....	² 22, 144	+1, 365

¹ Includes 558 male pupils enrolled in home economic courses in evening schools or all-day schools.

² Includes 13 female teachers in agricultural schools. Figures for previous year included 9 female teachers in agricultural schools.

Civilian Rehabilitation

FOR over nine years the Federal Government has been cooperating with the States in the promotion of a vocational rehabilitation service. The program has now spread to 44 States and the District of Columbia, an act approved February 23, 1929, extending the provisions of vocational rehabilitation to the last-mentioned jurisdiction. According to the report of the Federal Board for Vocational Education for the fiscal year 1928-29, since 1920 nearly 39,000 disabled persons have been rehabilitated and placed in paying employment at an average cost of \$250. In the year ending June 30, 1929, there were 4,645 persons rehabilitated—a decrease of 367 as compared with the preceding year. One of the significant factors in the decline in the number of such cases for the last three years is the decision by the States to define vocational rehabilitation more sharply than was the practice at an earlier period.

Some statistical comparisons in connection with vocational rehabilitation work are made below:

Item	1928-29	Increase or decrease compared with preceding year
Expenditures:		
From Federal funds.....	\$664, 739	+\$10, 881
From State and local funds.....	825, 383	—61, 880
Total.....	1, 490, 122	—50, 999
Total number rehabilitated by States.....	4, 645	—367
Total live roll.....	16, 787	+388

On the basis of statistics compiled by the National Safety Council it is reported that 279,000 persons per annum suffer permanently disabling injuries through public and industrial accidents. Furthermore, it is estimated that 40,000 or 50,000 more persons per annum are disabled through disease or congenital causes. If, as experienced rehabilitation officials hold, one out of every five or six disabled persons needs vocational rehabilitation, every year produces an army of at least 55,000 disabled persons who require rehabilitation service.

In a discussion of the economic returns from vocational rehabilitation it is reported that the average weekly wage of persons rehabilitated in the United States in the year ending June 30, 1924, was \$26.07 and that the average life expectancy of such persons was at least 20 years. From these figures it is computed that the earnings of these rehabilitants during this period would amount to \$147,004,000, whereas the cost to Federal and State Governments for this rehabilitation was \$1,242,557. If these rehabilitants were not able to support themselves they would have to be supported by relatives, friends, the community, or the State. According to the report such maintenance would cost from \$300 to \$500 per person per annum.

The more pressing current problems to be solved in connection with vocational rehabilitation are summarized as follows by the Federal Board for Vocational Education:

Specialized procedure in the rehabilitation of the following classes: Blind deafened, cardiacs, and tuberculous.

Proper correlation of the rehabilitation and the crippled children's work.

Effective vocational advisement.

Employment training in rehabilitation.

Effective methods of placement of the rehabilitated.

Correlation of rehabilitation and allied activities.

Much of the work in the States is still in the experimental stage, and there will continue to be needed a strong central agency serving as a clearing house of information to the States, and acting as a research and investigational body, serving the States in the promotion of the program.

LABOR TURNOVER

Labor Turnover in American Factories, December, 1929

THE table below shows the index of labor turnover in American factories for the month of December and for the year 1929.

Beginning with January, 1930, indexes will be shown separately for automobiles, boots and shoes, and cotton manufacturing

AVERAGE LABOR TURNOVER RATES IN SELECTED AMERICAN FACTORIES¹

[The rate is per 100 employees on the pay roll. The monthly rate is the rate for the calendar month. The equivalent annual rate is the rate for the month expressed as an annual rate]

A.—Monthly Rates

Month	Separation rates								Accession rate		Net turn-over rate	
	Quit		Lay-off		Discharge		Total ¹					
	1928	1929	1928	1929	1928	1929	1928	1929	1928	1929	1928	1929
January.....	1.3	2.3	0.7	0.4	0.3	0.4	2.4	3.1	2.8	5.0	2.4	3.1
February.....	1.2	2.4	.6	.4	.4	.5	2.1	3.2	2.4	4.4	2.1	3.2
March.....	1.7	3.1	.7	.5	.4	.6	2.8	4.2	3.0	5.2	2.8	4.2
April.....	2.1	3.6	.6	.5	.4	.6	3.1	4.6	3.3	5.8	3.1	4.6
May.....	2.4	3.5	.7	.5	.4	.5	3.5	4.4	4.0	5.1	3.5	4.4
June.....	2.2	3.2	.6	.4	.4	.5	3.2	4.2	3.4	5.0	3.2	4.2
July.....	2.3	3.0	.5	.4	.4	.5	3.2	3.9	4.0	5.2	3.2	3.9
August.....	2.7	3.4	.4	.4	.4	.4	3.6	4.1	4.7	4.6	3.6	4.1
September.....	3.3	3.1	.4	.5	.4	.5	4.2	4.1	4.7	4.9	4.2	4.1
October.....	2.7	2.4	.4	.8	.4	.4	3.6	3.6	4.8	3.9	3.6	3.6
November.....	2.1	1.6	.4	1.3	.4	.3	2.9	3.2	4.1	1.9	2.9	1.9
December.....	1.7	³ 1.1	.4	³ 1.2	.4	³ 1.2	2.5	³ 2.5	3.2	³ 1.1	2.5	³ 1.1
Average..	2.1	2.7	.5	.6	.4	.5	3.1	3.8	3.7	4.3	3.1	3.8

B.—Equivalent Annual Rates

January.....	15.7	26.7	8.5	4.2	3.6	5.3	27.8	36.2	33.4	58.6	27.8	36.2
February.....	15.1	31.0	7.9	4.7	4.6	6.0	27.6	41.7	31.6	56.9	27.6	41.7
March.....	20.1	36.8	8.4	5.7	4.3	6.7	32.8	49.2	35.9	61.2	32.8	49.2
April.....	26.0	43.3	7.1	5.5	5.1	6.9	38.2	55.7	40.0	70.2	38.2	55.7
May.....	28.2	40.8	8.3	5.7	5.0	5.6	41.5	52.1	47.2	59.9	41.5	52.1
June.....	27.1	39.5	7.5	5.4	4.9	6.2	39.5	51.1	41.3	60.9	39.5	51.1
July.....	27.2	35.7	5.9	5.0	4.9	5.8	38.0	46.5	46.9	61.4	38.0	46.5
August.....	31.9	38.4	5.1	4.8	5.3	5.3	42.3	48.5	55.7	54.3	42.3	48.5
September.....	40.3	38.2	5.0	6.3	5.3	6.1	50.6	50.6	56.9	59.7	50.6	50.6
October.....	31.9	28.5	4.7	9.4	5.3	4.7	41.9	42.8	57.1	46.0	41.9	42.8
November.....	25.6	19.4	4.8	15.3	4.9	3.7	35.3	38.4	50.1	23.7	35.3	23.7
December.....	20.1	³ 12.7	4.7	³ 14.3	4.4	³ 2.5	29.2	³ 29.5	38.1	³ 13.5	29.2	³ 13.5
Average..	25.8	32.6	6.5	7.2	4.8	5.4	37.1	45.2	44.5	52.2	37.1	45.2

¹ Now numbering over 450, with nearly 750,000 employees. The form of average used is the unweighted median of company rates.

² Arithmetic sum of quit, lay-off, and discharge rates.

³ Preliminary, subject to revision.

For the second consecutive month the separation rate has been higher than the accession rate. Expressed on an equivalent annual basis, the December separation rate was 29.5 and the accession rate

only 13.5. The quit rate was 12.7, the lay-off rate 14.3, and the discharge rate 2.5. For the first time in two years the lay-off rate is higher than the quit rate.

Comparing the December rates with the November rates there is a decrease in each class of separation rate and in the accession rate.

In comparison with the December, 1928, rates, the December, 1929, quit rate and discharge rate show substantial decreases. In contrast there is a rise of 9.6 points in the lay-off rate, comparing December, 1929, with December, 1928. The total separation rate was 0.3 of a point higher in December, 1929. The accession rate was 24.6 points lower than during December, 1928.

The yearly average of the monthly rates shows that the 1929 separation rate was 45.2, compared with 37.1 for the year 1928. The annual accession rate was 52.2 for 1929 and 44.5 for 1928. The quit, lay-off, and discharge rates were all higher for 1929 than for 1928.

The annual rates were obtained by adding the monthly rates and dividing by 12, except in the case of the net turnover rates.

As before explained, the bureau defines the turnover rate as the rate of replacement. That is, a growing plant has a higher accession than a separation rate or it would not be growing. A declining plant has a higher separation than accession rate. The net turnover rate, therefore, is the same as the accession rate in a declining force and the same as the separation rate in a plant having an increasing force. As the average accession rate for the year 1929 is higher than the average separation rate for that year, the net turnover rate is the average separation rate.

INDUSTRIAL DISPUTES

Strikes and Lockouts in the United States in December, 1929

DATA regarding industrial disputes in the United States for December, 1929, with comparable data for preceding months, are presented below. Disputes involving fewer than six workers and lasting less than one day have been omitted.

Table 1 is a summary table showing for each of the months—January, 1927, to December, 1929, inclusive—the number of disputes which began in those months, the number in effect at the end of each month, and the number of workers involved. It also shows, in the last column, the economic loss (in man-days) involved. The number of workdays lost is computed by multiplying the number of workers affected in each dispute by the length of the dispute measured in working days as normally worked by the industry or trade in question.

TABLE 1.—INDUSTRIAL DISPUTES BEGINNING IN AND IN EFFECT AT END OF EACH MONTH, JANUARY, 1927, TO DECEMBER, 1929

Month and year	Number of disputes—		Number of workers involved in disputes—		Number of man-days lost during month
	Beginning in month	In effect at end of month	Beginning in month	In effect at end of month	
1927					
January.....	37	18	5,915	2,287	58,125
February.....	65	45	9,756	5,717	115,229
March.....	74	67	13,142	8,182	214,283
April.....	87	88	202,406	199,701	5,265,420
May.....	107	116	22,245	200,702	5,136,006
June.....	80	88	18,957	196,323	4,863,345
July.....	65	63	33,994	199,287	5,308,123
August.....	57	53	8,150	198,444	4,999,751
September.....	57	58	12,282	196,829	4,945,702
October.....	50	58	13,024	82,095	2,724,117
November.....	27	51	5,282	82,607	2,040,140
December.....	28	54	4,281	81,229	2,129,153
1928					
January.....	48	63	18,850	81,880	2,128,028
February.....	52	58	33,441	103,496	2,145,342
March.....	41	47	7,459	76,069	2,291,337
April.....	71	48	143,700	129,708	4,806,232
May.....	80	56	15,640	133,546	3,455,499
June.....	44	46	31,381	143,137	3,670,878
July.....	54	42	18,012	132,187	3,337,386
August.....	59	42	8,887	105,760	3,553,750
September.....	52	34	8,897	62,862	2,571,982
October.....	61	42	27,866	41,474	1,304,913
November.....	44	38	37,840	38,745	1,300,362
December.....	23	29	5,172	35,842	991,238
1929					
January.....	45	34	14,727	39,484	949,692
February.....	48	34	20,134	40,385	921,583
March.....	77	42	14,052	41,321	1,004,161
April.....	103	52	30,130	52,292	1,429,046
May.....	98	73	26,220	58,959	1,578,929
June.....	69	71	19,702	54,584	1,526,627
July.....	74	75	35,900	21,872	1,116,557
August.....	68	55	25,138	8,123	380,681
September.....	95	62	19,224	8,818	259,410
October.....	66	42	17,368	8,326	290,634
November ¹	52	42	12,390	10,957	312,982
December ¹	32	45	3,344	7,856	234,052

¹ Preliminary figures subject to change.

Occurrence of Industrial Disputes, by Industries

TABLE 2 gives by industry the number of strikes beginning in October, November, and December, 1929, and the number of workers directly involved.

TABLE 2.—INDUSTRIAL DISPUTES BEGINNING IN OCTOBER, NOVEMBER, AND DECEMBER, 1929

Industry	Number of disputes beginning in—			Number of workers involved in disputes beginning in—		
	October	November	December	October	November	December
Bakers.....		3			186	
Barbers.....		1			6	
Building trades.....	8	12	3	510	1,756	55
Chauffeurs and teamsters.....	10	7	2	6,496	2,045	90
Clothing.....	11	8	5	1,226	4,873	176
Food workers.....		1			30	
Furniture.....	3	2		171	88	
Glass workers.....	1			80		
Hotel and restaurant employees.....			1			15
Iron and steel.....		2			765	
Leather workers.....			1			100
Metal trades.....	3	2		315	50	
Miners.....	13	4	8	3,563	1,000	1,865
Motion-picture operators, actors, and theater employees.....	1			20		
Paper and paper goods workers.....			1			14
Pottery workers.....		1			40	
Printing and publishing.....	1		1	40		15
Railway workers.....	1			75		
Rubber.....			1			160
Municipal workers.....	1	1		1,800	200	
Teachers.....	1			140		
Textiles.....	11	7	6	1,432	691	596
Tobacco.....			1			200
Other occupations.....	1	1	2	1,500	600	58
Total.....	66	52	32	17,368	12,390	3,844

Size and Duration of Industrial Disputes, by Industries

TABLE 3 gives the number of industrial disputes beginning in December, 1929, classified by number of workers and by industries:

TABLE 3.—NUMBER OF INDUSTRIAL DISPUTES BEGINNING IN DECEMBER, 1929, CLASSIFIED BY NUMBER OF WORKERS AND BY INDUSTRIES

Industry	Number of disputes beginning in December, 1929, involving—			
	6 and under 20 workers	20 and under 100 workers	100 and under 500 workers	500 and under 1,000 workers
Building trades.....	2	1		
Chauffeurs and teamsters.....		2		
Clothing.....	1	3	1	
Hotel and restaurant employees.....	1			
Leather.....			1	
Miners.....		2	5	1
Paper and paper-goods workers.....	1			
Printing and publishing.....	1			
Rubber.....			1	
Textiles.....	1	3	2	
Tobacco.....			1	
Other occupations.....		2		
Total.....	7	13	11	1

In table 4 are shown the number of industrial disputes ending in December, 1929, by industries and classified duration:

TABLE 4.—NUMBER OF INDUSTRIAL DISPUTES ENDING IN DECEMBER, 1929, BY INDUSTRIES AND BY CLASSIFIED DURATION

Industry	Classified duration of strikes ending in December					
	One-half month or less	Over one-half and less than 1 month	1 month and less than 2 months	2 months and less than 3 months	3 months and less than 4 months	7 months and less than 8 months
Bakers.....	1					
Barbers.....	1					
Building trades.....	1	2	2			
Clothing.....	4		1			
Food workers.....			1			
Hotel and restaurant employees.....	1					
Lumber and timber workers.....						1
Metal trades.....					2	
Miners.....	2					
Motion-picture operators, actors, and theater employees.....				1		
Rubber.....	1					
Municipal workers.....			1			
Textiles.....	3		2	1		
Tobacco.....	1					
Total.....	15	2	7	2	2	1

Principal Strikes and Lockouts Beginning in December, 1929

No STRIKES of more than minor importance began in December. Several small strikes of bituminous coal miners occurred during the month. The more important of these are listed below, by States.

Illinois.—The Franco No. 1 mine of the Cosgrove-Meehan Coal Co. was affected by a strike of 320 miners, beginning December 26, because of the company's alleged refusal to pay for two hours' work on December 14. Work was resumed January 7, the case to be handled according to joint State agreement.

The Franklin County Coal Co., near Herrin, is reported to be involved in a strike of 500 employees beginning December 31, because of the discharge of 16 men employed on machine-loading devices, who had remained at home in an effort to equalize the labor between the machine loader and hand loaders. It is said that this strike was in disapproval of the new contract whereby part of the men work under the old method of hand loading and part under the new machine-loading device.

Iowa.—Demanding an "extension of man-trip over dangerous hill, taking them to and from working places," 450 miners employed by the Scandia Coal Co., of Madrid, Iowa, were on strike from December 2 to December 3. Arrangements were made to haul them part of the way by making a new road.

Kentucky.—In the western part of the State an unsuccessful strike of 250 miners against the W. G. Duncan Coal Co., of Greenville, because of dissatisfaction with local conditions, began on December 18 and ended on December 23.

Textile workers, Rhode Island.—The employees of the Bradford Dyeing Association (U. S. A.) at Bradford, dyers and finishers of

rayon and cotton fabrics, began a strike on December 2 which ended December 12. Workers involved numbered 362, including 45 females. This strike, it is said, was put into effect after a vote had been taken by the workers who are members of Local No. 1598, United Textile Workers of America, and was in protest against a change in working conditions intended to bring about increased production, being precipitated by the discharge of 17 folders and the refusal of the company to confer with the union committee as to their reinstatement and the method of application of the efficiency plan. While the strike is understood to have resulted in changing the shop from a union to an open shop, it is reported that the employees are to be reinstated as soon as production will allow and that strikers are to be given preference in reemployment after December 12 over newcomers; that the management will not discriminate against any of its employees because of membership in any organization or legitimate activities connected therewith, and that the management is always willing to meet a committee of its workers for the purpose of adjusting any grievances which may arise.

Principal Strikes and Lockouts Continuing into December, 1929

Cleaners and dyers, Chicago.—The lockout of 2,500 employees by the Chicago Master Cleaners and Dyers Association, which began November 4, is reported by the press to have ended by December 13, employees being back at work on the basis that prevailed before the lockout, with points of difference to be arbitrated, the most difficult problem to solve being a million-dollar cleaning and dyeing plant that the union is erecting. The employers want the project abandoned.

Later reports are to the effect that under the terms of the agreement, which was signed on December 27, Dr. B. M. Squires, of the University of Chicago, was made impartial chairman to administer the terms of the settlement, and the disposition of the union-owned plant in such a manner that the union will not be a business competitor of the employers is said to be one of the terms of the settlement. Doctor Squires's salary and expenses as impartial chairman are to be paid jointly by the parties involved.

Millinery workers, Chicago.—No report has been received of the ending of the lockout of 1,500 millinery workers beginning November 15.

Conciliation Work of the Department of Labor in December, 1929

By HUGH L. KERWIN, DIRECTOR OF CONCILIATION

THE Secretary of Labor, through the Conciliation Service, exercised his good offices in connection with 20 labor disputes during December, 1929. These disputes affected a known total of 6,112 employees. The table following shows the name and location of the establishment or industry in which the dispute occurred, the nature of the dispute (whether strike or lockout or controversy not having

reached the strike or lockout stage), the craft or trade concerned, the cause of the dispute, its present status, the terms of settlement, the date of beginning and ending, and the number of workers directly and indirectly involved.

On January 1, 1930, there were 42 strikes before the department for settlement and in addition 15 controversies which had not reached the strike stage. The total number of cases pending was 57.

LABOR DISPUTES HANDLED DURING THE MONTH OF DECEMBER, 1929

Company or industry and location	Nature of controversy	Craftsmen concerned	Cause of dispute	Present status and terms of settlement	Duration		Workers affected	
					Beginning	Ending	Directly	Indirectly
DePaul Hospital, St. Louis, Mo.	Controversy	Bricklayers, masons, and plasterers.	Jurisdiction of window calculating.	Unclassified. Continued negotiations between officials; commissioner not engaged.	1929 Dec. 1	1929 Dec. 8	50	350
Window Cleaners' Employers Association, New York City.	Strike	Window cleaners.	Asked 5-day week and 10 per cent wage increase.	Adjusted. Nearly all returned to work; some increase allowed.	Oct. 16	Nov. 20	900	150
Associated Dental Laboratories, New York City.	do.	Dental laboratory workers.	Asked 8-hour day, 44-hour week, \$18 per week minimum for helpers, and \$75 for skilled workmen.	Unclassified. Partial adjustment before commissioner's arrival.	Nov. 22	Dec. 4	600	350
Scandia Coal Co., Madrid, Iowa.	do.	Mine workers.	Working conditions.	Adjusted. Satisfactorily settled.	Dec. 2	Dec. 3	450	---
Bayuk Bros. Cigar Co., Allentown, Pa.	Controversy	Cigar makers.	Objection to change in piecework. Factory closed temporarily.	Unclassified. Factory opened and workers returned of own volition.	Dec. 6	Dec. 12	200	5
Bradford Dyeing Association, Bradford, R. I.	Strike	Dyers.	Protest against efficiency system; discharges.	Adjusted. Discharged folders reinstated; all returned; committee continued negotiations.	Dec. 2	do.	362	---
University Club, Philadelphia, Pa.	Controversy	Building crafts.	Nonunion labor employed.	Pending.	do.	Dec. 9	35	---
St. Francis Hospital, Pittsburgh, Pa.	Strike	Carpenters v. lathers and steel workers.	Certain work awarded to lathers and steel workers; carpenters refused to accept decision.	Adjusted. Returned; lathers finished work in question; negotiations continued.	Dec. 9	Dec. 30	4	71
Terrazzo Workers, Indianapolis, Ind.	Controversy	Terrazzo workers.	Dispute relative to violation of union regulations.	Pending.	Nov. 2	---	15	50
Jos. N. Smith Co., Detroit, Mich.	do.	Metal polishers.	Wages cut 25 cents per hour; discharges.	Adjusted. Company will rehire as convenient.	Dec. 10	Dec. 17	20	380
Queen Anne Candy Co., Hammond, Ind.	Threatened strike.	Candy makers.	Wage increase.	Adjusted. Workers remained at work; no change in working conditions.	Dec. 6	Dec. 14	500	---
The W. B. Conky Co., Hammond, Ind.	do.	Printers and binders.	Wage increase and working conditions.	do.	Dec. 8	do.	180	370
Kuback Co., contractors, Long Beach, Calif.	Lockout.	Pile drivers.	Refusal to pay overtime when men are called to work on rising or falling tide.	Pending.	Nov. 25	---	130	200
Curtis-Stephens-Embry Shoe Co., Reading, Pa.	Strike	Shoe cutters.	Prices for piecework reduced.	Adjusted. Places filled by other workers.	Dec. 10	Dec. 13	15	---
Bromly Plating Co., Detroit, Mich.	Controversy	Metal polishers.	Wages cut 25 cents per hour.	Adjusted. Scale of wages fixed in conference by parties at interest.	Dec. 9	Dec. 17	12	8
Tower Building, Indianapolis, Ind.	Strike.	Terrazzo workers' helpers.	Alleged discrimination against union man.	Adjusted. Satisfactorily arranged.	Dec. 23	Dec. 26	10	75

Methodist Hospital, Indianapolis, Ind.	do.	do.	do.	do.	do.	10	30
Lehigh & Wyoming Valley Coal Co., Dupont, Pa.	do.	Miners.	Company failed to pay miners.	Pending.	do.	150	-----
Sadonia Mills, Mystic, Conn.	do.	Weavers.	Company asked weavers to operate 6 looms instead of 4.	Unable to adjust. Weavers refused to operate 6 looms; mills closed.	Dec. 17 1930 Jan. 7	100	110
Connelly Schoolhouse, Pittsburgh, Pa.	do.	Building craftsmen.	Jurisdiction of cork work.	Adjusted. All crafts returned to work; work in dispute to await decision of officials.	Dec. 10 Jan. 6	10	190
Total.						3,753	2,359

LABOR AWARDS AND DECISIONS

Arbitration Awards

Typographical Workers—Chattanooga, Tenn.

PROF. PAUL H. DOUGLAS, chairman of the International Board of Arbitration, made the following decision in the dispute between the Typographical Union, Local No. 89, and two Chattanooga newspapers. Both the union and the newspapers had appealed from the decision of the local arbitrator, Judge Nathan L. Bachman.

This is an appeal by both Typographical Union No. 89 and the two Chattanooga newspapers from a decision by the local arbitrator, Judge Nathan L. Bachman, which (1) established a 3-year contract dating from November 2, 1928, (2) maintained the existing weekly wage scale of \$42 for day work and \$45 for night work but (3) decreased the length of the basic day from 7½ hours or 45 hours per week to 7 hours a day or 42 hours per week, (4) fixed the overtime rate at one and one-half times the straight time rate, (5) maintained the already existing limited hours for night work on the morning papers and (6) left unaltered the already existing standards of competency.

It should be noted that aside from the foreign language press, the printers in only 8 out of 356 cities have as short a basic working week in the newspaper industry as that of 42 hours. This decision would therefore reduce the basic hours of work in Chattanooga far below the existing average for the industry as a whole.

On the other hand, the present relatively low wage scale of the Chattanooga compositors, which is now exceeded by 310 out of 366 unions, is not increased by the decision of the local arbitrator. The Chattanooga scale would therefore be kept at a point appreciably below the average for the country as a whole, although of course the difference between it and the average for the South alone would not be so great.

In the opinion of the chairman, the printers of Chattanooga deserve an increase in their basic scale more than they do a decrease in the length of the basic week. The existing basic 7½ hour day or 45-hour week is therefore maintained for the 3-year period beginning November 2, 1928, but the following rates of pay are also established:

(1) For the period from November 2, 1928, to November 2, 1929, the weekly basic wage scale for printers on the day shift shall be \$43 and for those on the night shift, \$46. The retroactive back pay for this period is to be paid as rapidly as possible by the newspaper publishers to all those who were employed during this year.

(2) Beginning with November 2, 1929, and lasting until November 2, 1931, the weekly wage scale shall be \$44.50 for printers on the day shift and \$47.50 for printers on the night shift. The retroactive pay accruing under this provision shall also be adjusted as speedily as possible by the employers.

Since both publishers and the union have agreed to adjust the wages of foremen and other employees according to the scale for journeymen on both day and night work, no ruling is made by the board on this point. The parties in question are, however, expected to adjust these matters automatically.

The questions of the duration of the contract, the scale of wages, and the length of the basic week having been decided, there remain the questions of the overtime rates, the limiting hours for the night shift, and the standard of competency. On all of these matters, the decision of the local arbitrator is upheld.

The decision of Judge Bachman, local arbitrator, in regard to the 7-hour day, is given below:

I am of the opinion that the demand for a 7-hour day should be granted. That the trend of the times in our country in most of the skilled vocations is toward a shorter work week is apparent to anyone paying heed to industrial conditions; the movement is not, as was said with reference to wages, one dependent upon local conditions, but it is the outgrowth of concerted thought and observation of conditions generally affecting the well-being of the great body of skilled workmen and their employers, from which study is evolved a policy looking toward that condition which is most wholesome for both employer and employee. I see no good reason why this policy should not be extended to those in the printing industry, requiring, as their business does, the coordination of mental and physical effort to a marked degree. Nor do I see that the 7-hour day will work any undue hardships on the publishers; the execution of normal editions of their papers can in all probability be done with 7 hours constituting a day's work, while the larger editions do and will continue to require extra hours and extra help. That the curtailment of hours is not a hardship is evidenced by the agreed reduction from 8 to 7½ hours in return for some slight decrease in wages made between the parties immediately after the arbitration proceedings in 1921.

Railway Clerks—Nashville, Chattanooga & St. Louis Railway

DECEMBER 10, 1929, an arbitration award in a dispute between the Clerical Employees' Association of the Nashville, Chattanooga & St. Louis Railway and the Nashville, Chattanooga & St. Louis Railway Co. was made by a board consisting of A. G. Miller, representing the carrier, T. Fulcher Jones, representing the employees, and Lee Brock as neutral member.

The clerical employees had made a request for an increase of 10 per cent in their wages.

The majority of the board rendered the following decision:

After due consideration, a majority of the board decides that said wages shall be increased 3 per cent per annum, to take effect on April 1, 1929, for services rendered after that date. The 3 per cent above awarded shall apply to all clerical employees, except that the minimum and step rate is hereby established as follows: \$60—\$65—\$74—\$91.50.

A. G. Miller, representing the carrier, dissented from this award.

HOUSING

Building Permits in Principal Cities, December, 1929

THE December report of building permits issued in principal cities of the United States is presented herewith. Reports were received from 275 cities having a population of 25,000 and over. Comparative figures for November are also given for 273 cities.

As before stated, the cost figures shown below are for the cost of the building only. No land costs are included. Reports for individual cities cover only the corporate limits of such cities.

Table 1 shows the total estimated cost of new residential buildings, new nonresidential buildings, total building operations (including alterations and repairs), and families provided for in new buildings, by districts, as shown by permits issued, together with the percentage of increase or decrease in December as compared with November.

TABLE 1.—ESTIMATED COST OF NEW RESIDENTIAL BUILDINGS, NEW NONRESIDENTIAL BUILDINGS, AND TOTAL BUILDING OPERATIONS IN 273 CITIES OF THE UNITED STATES HAVING A POPULATION OF 25,000 OR OVER, BY GEOGRAPHIC DIVISIONS

Geographic division	New residential buildings				New nonresidential buildings, estimated cost		Total construction (including alterations and repairs), estimated cost	
	Estimated cost		Families provided for in new dwelling houses					
	Nov., 1929	Dec., 1929	Nov., 1929	Dec., 1929	Nov., 1929	Dec., 1929	Nov., 1929	Dec., 1929
New England.....	\$4,409,700	\$2,508,100	659	389	\$2,567,465	\$7,124,835	\$8,662,682	\$10,928,577
Middle Atlantic.....	19,797,131	13,323,200	2,848	2,103	41,030,590	26,490,265	74,259,704	48,053,200
East North Central.....	12,615,260	7,494,496	2,261	1,645	27,701,995	20,309,506	44,187,096	29,815,741
West North Central.....	1,871,875	947,115	528	251	2,000,940	2,058,124	5,502,502	3,829,407
South Atlantic.....	2,602,467	3,201,105	589	301	2,639,394	3,219,899	7,700,752	8,073,309
South Central.....	1,910,734	1,460,267	721	501	2,399,262	5,235,419	5,031,383	8,618,203
Mountain and Pacific.....	4,537,290	3,254,550	1,243	947	3,978,130	3,781,882	9,897,723	8,561,515
Total.....	47,744,457	32,188,833	8,849	6,137	82,317,776	68,219,930	155,241,842	117,882,952
Per cent of change.....		-32.6		-30.6		-17.1		-24.1

Total building operations in the 273 cities from which reports were received for both December and November show a decrease of 24.1 per cent in indicated expenditures comparing the December permits issued with the November permits issued. Residential buildings decreased 32.6 per cent in indicated expenditures and nonresidential buildings 17.1 per cent.

Families provided for decreased 30.6 per cent, comparing December with November permits.

Reports from these 273 cities for December show permits to have been issued for building operations to cost \$117,882,952. The November permits show building operations to cost \$155,241,842. New

dwelling places were provided for 6,137 families according to December permits and 8,849 according to November permits. The States of New Jersey, New York, Massachusetts, Illinois, and Pennsylvania, through their departments of labor, are cooperating with the Bureau of Labor Statistics in collecting this information. Table 2 shows the estimated cost of new residential buildings, new nonresidential buildings, total buildings operations (including alterations and repairs), and the number of families provided for in new dwellings in each of the 273 cities from which reports were received for both November and December. Totals and percentages of increase or decrease in expenditures for each class of building and in the number of families provided for are shown by geographic divisions. Reports were received for both November and December from 44 cities in New England, 62 cities in the Middle Atlantic States, 70 cities in the East North Central States, 22 cities in the West North Central States, 30 cities in the South Atlantic States, 19 cities in the South Central States, and 26 cities in the Mountain and Pacific States.

New England States

In the New England States according to building permits issued there was an increase in indicated expenditures for all building operations in December as compared with November of 26.2 per cent. In nonresidential buildings there was a decrease of 43.1 per cent. In nonresidential buildings there was an increase of 177.5 per cent. The number of families provided with dwelling places in the new buildings for which permits were issued decreased 41 per cent, comparing December with November. Large increases for total building operations were shown in New Haven, Boston, Pittsfield, and Providence. Decreases were registered in Bridgeport, Lynn, Springfield, and Cranston. No reports were received from Hartford and New Britain, Conn.; Brookline and Worcester, Mass.; and Newport, R. I.

Middle Atlantic States

In the Middle Atlantic division there was a decrease of 35.3 per cent in the estimated cost of all building operations, comparing December permits with November permits. Residential buildings decreased 32.7 per cent and nonresidential buildings 35.4 per cent. The decrease in families provided for in new buildings was 26.2 per cent.

The large decrease in projected building in this division was largely accounted for by the slump in permits issued in New York City. In the Borough of Manhattan the estimated cost of the erection of buildings for which permits were issued in November was over \$28,000,000 and in December only \$12,000,000. There was a large slump also in the Borough of the Bronx and Borough of Brooklyn. Newark, also in the Metropolitan district, showed a marked decrease in indicated expenditures for building operations. There was also a decrease in Philadelphia, but a substantial increase in Pittsburgh. No reports were received from Amsterdam, N. Y., Chester, Harrisburg, Lebanon, and Reading, Pa.

East North Central States

COMPARING permits issued in December with those issued in November in the East North Central division, decreases were shown all along the line. The decrease in residential building was 40.6 per cent. The decrease in the number of families provided for in new house-keeping dwellings was 27.2 per cent. Indicated expenditures for new nonresidential buildings decreased 26.7 per cent, comparing December with November. Permits issued during December for all building operations in this division decreased 32.5 per cent in estimated costs, compared with those issued during November.

Over 80 per cent of the thirteen-million-dollar decrease in this division was accounted for by falling-off in indicated operations in the city of Chicago. Comparing December with November permits in that city, there was a decrease of \$11,000,000.

Notable increases in building operations in this division were shown in Fort Wayne, Hammond, and Milwaukee. In the latter city there was an increase of over \$4,000,000 in nonresidential building.

Decreases were shown in Chicago, Detroit, Akron, and Flint.

No reports were received from Canton and Youngstown, Ohio, Anderson, Ind., Battle Creek, Mich., Madison and Racine, Wis.

West North Central States

IN THE West North Central division there was a decrease in indicated expenditures for new residential buildings of 49.4 per cent, comparing permits issued in December with those issued in November. The permits issued for new nonresidential buildings during December, however, showed an increase of 2.9 per cent in estimated costs, compared with those issued in November.

The number of families planned for in new buildings decreased 52.5 per cent according to permits issued in December, compared with those issued in November.

Decreases in indicated expenditures were shown in St. Louis, St. Paul, and Minneapolis in comparing December with November. Substantial increases were noted in Topeka and Sioux Falls and a slight increase in Omaha.

No reports were received from Hutchinson, Kans., and Kansas City, Mo.

South Atlantic States

BUILDING permits issued in the South Atlantic division show an increase for all building operations and for residential and nonresidential buildings. The increase in indicated expenditures for residential buildings was 23 per cent, for nonresidential buildings 22 per cent; and for all building operations 4.8 per cent. The lower percentage of increase for total building operations was caused by a large decrease in the cost of repairs in the city of Baltimore for the month of December as compared with those in November.

The number of families provided for in the new buildings for which permits were issued in December decreased 48.9 per cent, compared with those provided for by the permits issued in November.

Large increases were shown in Washington, Richmond, and Durham. Decreases were shown for Norfolk, Savannah, Huntington, and Wheeling.

No reports were received from Pensacola and Tampa, Fla., Augusta, Ga., Wilmington, N. C., Spartanburg, S. C., and Charleston, W. Va.

South Central States

THE South Central division showed a decrease in indicated expenditures for residential building of 23.6 per cent, but an increase in indicated expenditures for new nonresidential building of 118.2 per cent. Comparing December with November permits there was an increase of 71.3 per cent in total expenditures for all building operations. There was a decrease of 30.5 per cent in the number of families provided for in new buildings.

The increase in nonresidential buildings was largely accounted for by large office and store buildings in San Antonio. A permit was issued in that city during December for an office building costing \$1,750,000.

Substantial gains in building operations were also shown in New Orleans, Oklahoma City, Memphis, and Austin. Decreases were indicated in Montgomery, Shreveport, and Fort Worth.

No reports were received from Birmingham, Ala., Fort Smith, Ark., Covington, Louisville, and Newport, Ky., Baton Rouge, La., Tulsa, Okla., Chattanooga, Tenn., El Paso, Galveston, Houston, Laredo, and Port Arthur, Tex.

Mountain and Pacific States

IN THE Mountain and Pacific division there was a decrease in the estimated cost of total building operations, of the estimated cost of residential buildings, and in the estimated cost of nonresidential buildings. The number of families provided for also showed a decrease, comparing December with November permits.

The decrease in the estimated cost of residential buildings was 28.3 per cent, in the estimated cost of nonresidential buildings 4.9 per cent, and in the estimated cost of total building operations 13.5 per cent.

The number of families provided for decreasing 23.8 per cent.

Increases were shown in total building operations in Phoenix, Denver, Salt Lake City, and Seattle, while decreases were shown in San Francisco, Pueblo, Ogden, and Tacoma.

No reports were received from Los Angeles and Oakland, Calif.

TABLE 2.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, NOVEMBER AND DECEMBER, 1929

New England States

City and State	New residential buildings				New nonresidential buildings		Total construction (including alterations and repairs)	
	Estimated cost		Families provided for in new dwellings		Estimated cost		Estimated cost	
	November, 1929	December, 1929	November, 1929	December, 1929	November, 1929	December, 1929	November, 1929	December, 1929
Connecticut:								
Bridgeport.....	\$116,600	\$164,500	26	18	\$225,155	\$85,580	\$413,500	\$261,668
Greenwich.....	345,500	280,800	19	8	89,380	21,205	483,385	344,705
Meriden.....	43,250	19,750	8	5	11,185	72,385	107,290	95,635
New Haven.....	940,000	55,000	7	9	367,250	1,902,085	1,345,675	1,981,385
New London.....	50,500	69,000	5	10	14,200	4,600	82,775	83,700
Norwalk.....	96,500	35,500	14	5	31,500	237,300	144,525	282,450
Stamford.....	89,700	55,000	12	3	228,445	14,850	342,720	98,425
Waterbury.....	61,000	20,500	12	5	91,900	20,100	173,900	41,600
Maine:								
Bangor.....	10,500	0	2	0	2,150	75	18,500	75
Lewiston.....	6,000	13,000	1	4	3,500	20,000	9,500	33,000
Portland.....	50,700	34,600	11	7	7,775	9,275	149,335	59,800
Massachusetts:								
Boston ¹	382,300	445,500	86	55	209,680	1,630,980	952,358	2,776,216
Brockton.....	35,800	14,200	6	3	6,755	2,550	58,370	33,305
Cambridge.....	47,000	37,500	2	7	41,590	51,885	133,545	116,860
Chelsea.....	0	0	0	0	11,500	600	14,020	5,725
Chicopee.....	6,500	0	2	0	57,100	1,450	67,750	1,450
Everett.....	11,000	19,000	3	5	13,300	1,100	34,000	28,100
Fall River.....	0	14,300	0	3	12,050	23,110	18,815	53,129
Fitchburg.....	6,500	14,000	1	3	3,550	8,380	10,775	26,480
Haverhill.....	6,500	3,000	2	1	6,795	475	25,095	7,825
Holyoke.....	0	500	0	1	1,100	250	26,970	9,650
Lawrence.....	8,000	0	2	0	2,750	4,450	21,700	17,550
Lowell.....	4,400	11,300	1	3	8,615	12,755	22,180	28,780
Lynn.....	65,900	14,300	13	3	8,960	4,720	103,370	28,313
Malden.....	78,000	80,000	24	24	75,555	300	160,655	88,410
Medford.....	108,600	80,500	18	14	22,525	11,900	149,255	98,100
New Bedford.....	0	0	0	0	108,775	17,800	122,825	28,000
Newton.....	300,500	235,000	29	22	60,340	8,810	408,863	252,595
Pittsfield.....	119,500	59,600	23	11	15,375	1,110,400	185,550	1,181,100
Quincy.....	182,900	112,100	48	33	26,140	258,055	219,353	382,588
Revere.....	17,500	7,000	4	2	1,600	1,725	30,700	18,825
Salem.....	72,500	15,500	18	3	15,040	9,250	133,295	33,645
Somerville.....	22,000	6,500	5	2	15,735	122,550	81,965	137,650
Springfield.....	151,400	58,450	32	15	304,450	26,775	509,495	100,435
Taunton.....	7,000	5,500	2	2	15,055	2,550	31,740	9,600
Waltham.....	29,000	41,000	5	12	22,510	4,650	60,960	48,400
Watertown.....	82,500	13,000	18	3	16,550	8,350	138,100	28,550
New Hampshire:								
Manchester.....	23,250	26,500	6	5	9,485	4,350	43,786	115,140
Rhode Island:								
Central Falls.....	43,200	13,000	15	4	4,575	0	48,025	13,050
Cranston.....	150,400	115,100	35	21	14,965	10,365	173,565	126,115
East Providence.....	54,800	44,000	11	7	157,400	114,400	223,907	164,010
Pawtucket.....	117,000	56,800	28	13	62,130	7,820	184,255	94,420
Providence.....	457,400	217,300	96	38	145,950	1,268,600	958,200	1,580,308
Woonsocket.....	7,500	0	1	0	16,925	6,025	38,125	11,725
Total.....	4,409,700	2,508,100	659	389	2,567,465	7,124,835	8,662,682	10,928,577
Per cent of change.....		-43.1		-41.0		+177.5		+26.2

Middle Atlantic States

New Jersey:								
Atlantic City.....	\$40,000	\$8,000	0	1	\$36,700	\$250	\$258,994	\$109,540
Bayonne.....	12,500	0	3	0	9,650	55,000	31,450	72,000
Bloomfield.....	94,000	345,000	19	74	18,000	24,000	114,000	370,000
Camden.....	77,700	108,000	36	27	72,455	107,075	248,118	233,913
Clifton.....	130,200	95,000	24	20	19,650	22,550	153,800	121,610
East Orange.....	28,500	867,000	5	131	153,245	58,400	202,525	948,235
Elizabeth.....	81,000	51,000	14	7	252,000	61,000	333,000	112,000
Hoboken.....	0	0	0	0	0	8,500	53,065	23,315

¹ Applications filed.

TABLE 2.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, NOVEMBER AND DECEMBER, 1929—Continued

Middle Atlantic States—Continued

City and State	New residential buildings				New nonresidential buildings		Total construction (including alterations and repairs)	
	Estimated cost		Families provided for in new dwellings		Estimated cost		Estimated cost	
	November, 1929	December, 1929	November, 1929	December, 1929	November, 1929	December, 1929	November, 1929	December, 1929
New Jersey—Contd.								
Irvington.....	\$28, 000	\$52, 500	6	11	\$12, 840	\$612, 193	\$51, 190	\$667, 603
Jersey City.....	25, 000	34, 000	3	8	193, 815	57, 745	244, 915	141, 213
Kearny.....	87, 000	0	22	0	37, 950	1, 645	128, 485	3, 145
Montclair.....	43, 000	28, 500	4	2	12, 343	2, 600	90, 603	39, 150
Newark.....	107, 120	209, 500	13	43	2, 191, 735	430, 115	2, 978, 184	730, 339
New Brunswick.....	260, 000	207, 000	6	66	9, 800	32, 700	280, 975	241, 750
Orange.....	225, 000	0	54	0	4, 850	10, 000	256, 858	43, 940
Passaic.....	343, 500	5, 500	3	2	37, 700	44, 000	407, 989	77, 493
Paterson.....	66, 550	116, 500	18	32	44, 182	73, 890	169, 637	229, 513
Perth Amboy.....	12, 500	7, 800	2	2	94, 123	19, 450	134, 048	32, 225
Plainfield.....	36, 186	9, 000	6	1	5, 600	1, 300	65, 246	33, 733
Trenton.....	14, 500	4, 000	3	1	65, 728	3, 015	121, 786	28, 950
Union City.....	6, 500	0	2	0	0	0	25, 100	3, 770
West New York.....	9, 550	0	2	0	10, 900	900	59, 965	3, 010
New York:								
Albany.....	118, 000	129, 500	14	11	12, 607	4, 050	235, 850	190, 390
Auburn.....	23, 700	13, 300	6	2	183, 560	81, 993	214, 240	104, 538
Binghamton.....	27, 700	19, 000	8	6	41, 598	38, 400	104, 882	98, 105
Buffalo.....	448, 000	341, 500	129	97	766, 710	823, 341	1, 357, 805	1, 201, 516
Elmira.....	31, 100	4, 800	5	1	4, 555	262, 945	43, 972	296, 430
Jamestown.....	35, 000	12, 600	8	4	104, 700	5, 550	149, 155	32, 195
Kingston.....	9, 200	18, 000	4	4	5, 850	4, 650	28, 080	198, 710
Mount Vernon.....	35, 000	106, 000	1	8	39, 200	157, 570	92, 250	310, 670
Newburgh.....	6, 000	11, 500	1	2	62, 850	72, 350	81, 050	86, 850
New Rochelle.....	156, 400	245, 000	11	11	64, 393	165, 089	259, 748	418, 089
New York City:								
Bronx ¹	924, 500	939, 600	200	184	5, 656, 770	2, 423, 262	6, 901, 080	3, 597, 062
Brooklyn ¹	977, 100	1, 940, 000	197	367	7, 056, 745	1, 011, 415	8, 862, 685	3, 744, 520
Manhattan ¹	9, 125, 000	2, 425, 000	765	191	11, 323, 965	7, 826, 300	28, 293, 825	12, 024, 783
Queens ¹	2, 409, 050	2, 218, 775	601	442	1, 688, 949	1, 050, 856	4, 416, 004	3, 699, 384
Richmond ¹	196, 300	218, 425	38	31	107, 030	157, 640	363, 114	413, 717
Niagara Falls.....	47, 800	0	12	0	163, 606	145, 300	256, 629	167, 028
Poughkeepsie.....	11, 500	24, 000	2	2	59, 150	41, 500	72, 900	123, 000
Rochester.....	399, 200	90, 800	18	19	182, 250	286, 325	608, 805	423, 606
Schenectady.....	72, 500	61, 000	15	10	62, 800	80, 100	171, 525	265, 200
Syracuse.....	334, 300	242, 000	67	28	109, 645	776, 850	777, 835	1, 133, 800
Troy.....	38, 500	29, 000	7	4	60, 050	59, 200	135, 749	101, 950
Utica.....	80, 000	63, 000	12	10	88, 300	157, 850	272, 100	254, 050
Watertown.....	3, 500	0	1	0	75, 745	425, 900	105, 757	427, 153
White Plains.....	104, 000	67, 500	11	6	188, 200	165, 100	325, 375	235, 900
Yonkers.....	628, 500	771, 000	80	16	509, 888	549, 010	1, 371, 063	1, 341, 535
Pennsylvania:								
Allentown.....	95, 500	13, 000	17	2	117, 900	8, 650	234, 699	34, 800
Altoona.....	47, 400	0	10	0	14, 973	2, 795	74, 847	12, 451
Bethlehem.....	3, 500	7, 000	1	2	11, 410	500	17, 205	22, 175
Butler.....	5, 000	0	1	0	2, 750	400	10, 950	1, 150
Easton.....	8, 600	0	1	0	6, 800	403, 650	21, 077	412, 850
Erie.....	145, 750	94, 950	58	28	40, 150	215, 775	207, 035	375, 425
Hazleton.....	0	0	0	0	2, 687	0	9, 463	0
Johnstown.....	15, 300	0	2	0	36, 510	2, 300	82, 935	4, 750
Lancaster.....	30, 000	0	6	0	3, 575	381, 450	67, 825	385, 300
McKeesport.....	77, 800	23, 800	10	5	6, 195	1, 648	94, 750	32, 766
New Castle.....	24, 300	12, 400	5	2	4, 855	1, 605	32, 595	18, 480
Norristown.....	61, 000	0	11	0	25, 819	2, 485	142, 651	3, 445
Philadelphia.....	578, 300	284, 000	122	24	6, 669, 250	4, 004, 210	7, 967, 315	5, 740, 405
Pittsburgh.....	569, 000	653, 500	103	130	1, 908, 657	3, 038, 730	2, 755, 452	5, 631, 826
Scranton.....	21, 550	13, 950	5	4	140, 425	3, 600	176, 225	48, 700
Wilkes-Barre.....	14, 800	14, 000	2	3	84, 375	10, 230	107, 046	25, 298
Wilkinsburg.....	36, 000	35, 000	6	11	3, 150	4, 185	73, 160	108, 772
Williamsport.....	80, 675	11, 000	19	3	15, 427	2, 178	137, 256	15, 943
York.....	12, 500	7, 000	3	2	21, 100	7, 000	45, 798	22, 037
Total.....	19, 797, 131	13, 323, 200	2, 848	2, 103	41, 030, 590	26, 490, 265	74, 259, 704	48, 053, 200
Per cent of change.....		-32. 7		-26. 2		-35. 4		-35. 3

¹ Applications filed.

TABLE 2.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, NOVEMBER AND DECEMBER, 1929—Continued

East North Central States

City and State	New residential buildings				New nonresidential buildings		Total construction (including alterations and repairs)	
	Estimated cost		Families provided for in new dwellings		Estimated cost		Estimated cost	
	November, 1929	December, 1929	November, 1929	December, 1929	November, 1929	December, 1929	November, 1929	December, 1929
Illinois:								
Alton	\$10,000	\$13,675	4	4	\$175	\$10,300	\$17,575	\$27,075
Aurora	30,935	9,400	8	2	210,754	1,586	254,050	18,939
Belleville	50,000	14,500	11	4	87,375	2,385	137,375	17,785
Bloomington	82,000	63,000	9	11	5,300	0	87,300	64,000
Chicago	4,184,800	3,169,300	555	731	12,291,250	1,987,900	16,760,680	5,509,825
Cicero	154,200	62,000	21	9	7,710	104,695	167,075	191,695
Danville	12,600	15,000	3	5	64,000	0	84,100	18,500
Decatur	25,800	0	5	0	513,610	560	559,210	3,760
East St. Louis	64,700	27,200	19	9	17,475	370,050	85,061	401,185
Elgin	16,450	20,700	3	4	25,950	26,650	58,320	61,539
Evanston	91,000	110,000	8	2	39,000	251,500	167,500	400,500
Joliet	19,000	34,000	3	4	464,000	60,000	508,700	130,900
Moline	51,500	187,000	9	30	576,945	5,950	644,239	198,791
Oak Park	74,500	168,500	5	3	8,550	38,000	92,775	213,400
Peoria	368,960	52,300	32	7	20,060	125,550	415,275	237,400
Quincy	25,800	0	4	0	46,300	2,500	88,725	2,500
Rockford	142,500	83,500	42	19	45,500	25,800	235,910	132,200
Rock Island	94,300	24,500	39	7	120,629	550	326,418	63,613
Springfield	58,800	12,600	15	3	146,485	9,635	221,176	27,412
Indiana:								
East Chicago	47,675	12,500	6	3	22,550	662,407	107,475	674,907
Elkhart	15,100	12,300	4	3	3,515	1,900	34,121	29,789
Evansville	28,400	23,700	11	7	221,360	15,300	265,885	45,650
Fort Wayne	173,020	79,900	35	17	466,488	1,195,938	675,388	1,322,913
Gary	83,500	24,000	14	7	56,425	5,850	159,600	33,750
Hammond	72,000	46,500	15	16	185,300	1,008,900	299,300	1,058,100
Indianapolis	242,300	150,995	66	42	140,664	339,875	501,544	540,833
Kokomo	0	6,050	0	2	144,215	5,010	147,520	17,005
Marion	28,000	0	4	0	82,000	6,150	117,000	6,375
Muncie	11,621	33,295	4	10	20,340	8,682	51,962	169,264
Richmond	18,500	30,000	5	8	21,546	30,325	46,690	77,505
South Bend	(7)	61,250	(7)	15	(7)	83,025	(7)	147,850
Terre Haute	18,500	3,400	3	2	2,060	900	22,876	15,270
Michigan:								
Bay City	14,000	5,500	5	2	32,500	800	64,736	13,150
Detroit	1,973,188	1,032,133	445	235	1,639,836	1,040,327	4,980,017	2,398,630
Flint	238,126	119,580	63	30	226,309	22,156	511,570	238,676
Grand Rapids	123,100	61,800	26	18	82,070	31,760	254,705	116,625
Hamtramck	27,000	5,500	6	2	16,675	3,200	43,675	14,000
Highland Park	0	165,000	0	42	49,090	10,300	64,145	179,800
Jackson	80,500	18,900	20	3	103,762	11,065	189,102	131,530
Kalamazoo	23,700	34,000	7	6	94,115	22,970	137,506	69,361
Lansing	97,900	40,768	21	11	921,118	144,270	1,033,848	202,703
Muskegon	42,950	19,900	13	5	141,770	632,850	196,005	656,842
Pontiac	51,700	38,650	20	14	63,931	424,930	124,786	467,030
Port Huron	3,000	0	1	0	132,000	0	135,550	1,100
Saginaw	92,480	26,700	8	9	157,811	167,635	277,329	214,950
Ohio:								
Akron	227,400	108,300	39	24	2,909,569	2,355,466	3,155,864	2,492,814
Ashtabula	13,000	0	2	0	2,285	28,360	19,185	32,282
Cincinnati	617,600	247,850	83	34	310,510	1,167,260	1,105,430	1,464,480
Cleveland	575,000	311,000	119	56	975,800	113,850	1,805,300	931,600
Columbus	237,900	87,800	37	15	282,150	95,700	562,700	211,800
Dayton	56,100	34,000	17	11	95,917	202,334	210,517	262,938
East Cleveland	192,000	0	15	0	15,300	100	216,335	1,300
Hamilton	50,550	44,600	15	5	3,475	850	57,300	72,325
Lakewood	61,600	24,500	7	6	437,770	9,540	505,805	37,340
Lima	0	7,000	0	1	2,055	4,500	9,250	31,200
Lorain	16,050	17,400	5	6	3,564	1,805	25,364	19,205
Mansfield	94,900	0	12	0	0	25,950	103,650	52,900
Marion	3,000	0	1	0	22,055	5,838	25,255	5,838
Newark	14,000	20,100	5	6	11,510	1,170	28,485	22,170
Portsmouth	7,500	5,500	2	2	9,125	2,200	17,325	9,325

* Not reported.

TABLE 2.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, NOVEMBER AND DECEMBER, 1929—Continued

East North Central States—Continued

City and State	New residential buildings				New nonresidential buildings		Total construction (including alterations and repairs)	
	Estimated cost		Families provided for in new dwellings		Estimated cost		Estimated cost	
	November, 1929	December, 1929	November, 1929	December, 1929	November, 1929	December, 1929	November, 1929	December, 1929
Ohio—Continued.								
Springfield.....	\$12,400	\$10,000	7	4	\$12,625	\$350	\$36,830	\$20,400
Staubenville.....	40,700	5,500	11	1	2,550	0	44,900	8,650
Toledo.....	92,950	47,200	25	15	377,190	70,510	520,120	207,493
Warren.....	39,400	31,500	13	10	56,725	9,450	98,415	42,925
Wisconsin:								
Fond du Lac.....	27,000	0	3	0	5,120	0	33,270	730
Green Bay.....	48,100	0	18	0	27,000	360	90,080	23,400
Kenosha.....	118,985	63,500	22	3	110,162	8,845	268,713	80,670
Milwaukee.....	623,000	352,600	159	93	1,819,735	6,877,243	2,918,297	7,331,160
Oshkosh.....	28,200	2,000	9	1	9,185	650	41,819	4,250
Sheboygan.....	58,000	0	11	0	4,360	1,214	69,970	9,169
Superior.....	122,800	16,000	27	4	2,080	8,850	287,670	25,550
Total.....	12,615,260	7,494,496	2,261	1,645	27,701,995	20,309,506	44,187,096	29,818,741
Per cent of change.....		-40.6		-27.2		-26.7		-32.5

West North Central States

Iowa:								
Burlington.....	\$2,400	\$15,000	1	5	\$15,650	\$1,725	\$18,150	\$17,605
Cedar Rapids.....	28,800	12,300	7	3	20,665	8,994	72,323	26,664
Council Bluffs.....	10,000	0	3	0	5,500	13,000	24,800	14,000
Davenport.....	49,400	53,000	12	11	29,160	111,950	89,875	175,683
Des Moines.....	51,000	33,850	12	7	131,582	14,500	253,947	82,610
Dubuque.....	3,000	2,950	1	1	1,255	1,750	15,431	9,753
Ottumwa.....	0	3,500	0	1	0	37,215	5,000	40,715
Sioux City.....	41,700	30,500	14	7	147,895	16,325	190,895	47,975
Waterloo.....	26,000	13,600	8	6	7,075	4,325	44,225	17,925
Kansas:								
Kansas City.....	43,100	32,950	16	16	117,865	2,650	167,465	41,425
Topeka.....	21,700	3,100	6	2	23,114	89,090	49,989	104,825
Wichita.....	172,350	162,500	64	43	50,543	73,855	253,999	250,633
Minnesota:								
Duluth.....	28,000	18,500	7	4	6,795	950	96,382	47,850
Minneapolis.....	481,235	187,925	116	52	320,760	27,510	1,298,215	349,640
St. Paul.....	233,640	99,840	41	15	484,458	210,060	787,205	372,069
Missouri:								
Joplin.....	12,000	5,400	6	3	3,000	54,100	17,000	62,200
Springfield.....	72,100	30,600	21	14	27,335	11,350	112,110	126,900
St. Joseph.....	13,900	3,800	7	2	8,520	0	30,007	8,862
St. Louis.....	420,500	151,700	119	33	457,483	836,795	1,432,749	1,351,053
Nebraska:								
Lincoln.....	42,200	18,000	17	5	59,420	27,520	109,570	45,520
Omaha.....	84,850	64,000	40	20	27,915	405,900	341,115	482,750
South Dakota:								
Sioux Falls.....	34,000	3,500	10	1	54,950	108,500	91,450	152,750
Total.....	1,871,875	947,115	528	251	2,000,940	2,058,124	5,502,502	3,829,407
Per cent of change.....		-49.4		-52.5		+2.9		-30.4

South Atlantic States

Delaware:								
Wilmington.....	\$101,500	\$60,500	23	11	\$40,825	\$12,050	\$192,004	\$165,885
District of Columbia:								
Washington.....	623,300	1,494,400	61	26	260,395	685,900	1,245,189	2,706,973
Florida:								
Jacksonville.....	79,900	46,025	37	14	42,745	51,128	165,850	139,273
Miami.....	35,000	60,650	8	11	255,000	111,145	378,617	247,162
St. Petersburg.....	23,400	14,300	4	3	12,300	27,000	56,100	54,700

TABLE 2.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, NOVEMBER AND DECEMBER, 1929—Continued

South Atlantic States—Continued

City and State	New residential buildings				New nonresidential buildings		Total construction (including alterations and repairs)	
	Estimated cost		Families provided for in new dwellings		Estimated cost		Estimated cost	
	November, 1929	December, 1929	November, 1929	December, 1929	November, 1929	December, 1929	November, 1929	December, 1929
Georgia:								
Atlanta.....	\$88,273	\$86,350	37	49	\$119,375	\$116,686	\$258,548	\$261,316
Columbus.....	43,625	2,600	42	6	34,285	330	81,850	20,195
Macon.....	1,705	10,000	4	2	14,900	13,000	67,786	50,440
Savannah.....	34,900	23,500	10	5	5,000	3,350	41,492	27,995
Maryland:								
Baltimore.....	939,000	766,000	200	66	572,900	1,490,200	2,694,000	2,734,460
Cumberland.....	10,300	8,000	3	1	3,518	2,637	15,693	12,137
Hagerstown.....	24,400	74,000	5	5	2,510	6,750	27,060	82,250
North Carolina:								
Asheville.....	17,150	91,400	2	1	8,830	1,245	37,490	100,790
Charlotte.....	130,108	77,450	36	19	16,560	2,375	208,173	93,992
Durham.....	28,500	44,150	10	22	33,462	219,500	65,212	266,200
Greensboro.....	60,019	4,000	11	1	587,217	965	656,791	15,987
Winston-Salem.....	25,000	14,200	9	6	10,645	6,765	50,695	43,504
South Carolina:								
Charleston.....	8,000	2,400	5	2	6,850	0	49,920	6,900
Columbia.....	51,100	10,500	15	5	3,600	107,825	70,960	121,525
Greenville.....	69,650	0	14	0	63,400	31,080	137,960	57,685
Virginia:								
Lynchburg.....	32,130	2,600	6	3	2,125	160,540	37,915	172,509
Newport News.....	9,800	6,500	3	2	2,174	2,048	21,485	34,132
Norfolk.....	16,200	35,900	5	8	169,355	34,175	196,600	82,455
Petersburg.....	18,300	1,250	6	1	6,250	50	29,745	1,450
Portsmouth.....	2,000	3,650	2	2	750	200	9,915	16,633
Richmond.....	66,900	200,790	12	22	127,243	112,995	287,069	415,229
Roanoke.....	21,607	48,990	6	5	46,860	15,060	75,140	65,580
West Virginia:								
Clarksburg.....	4,400	2,500	3	1	15,340	290	22,675	15,540
Huntington.....	9,000	0	3	0	156,330	3,000	165,330	5,560
Wheeling.....	27,300	8,500	7	2	18,650	1,590	353,488	54,951
Total.....	-2,002,467	3,201,105	589	301	2,639,394	3,219,899	7,700,752	8,073,309
Per cent of change.....	-----	+23.0	-----	-48.9	-----	+22.0	-----	+4.8

South Central States

Alabama:								
Mobile.....	\$19,800	\$35,450	5	10	\$9,900	\$21,000	\$54,800	\$71,518
Montgomery.....	47,900	12,500	39	12	31,700	9,845	123,090	44,436
Arkansas:								
Little Rock.....	(?)	99,580	(?)	29	(?)	325,235	(?)	456,799
Kentucky:								
Lexington.....	46,450	5,500	4	4	6,250	46,765	70,685	83,425
Paducah.....	11,300	1,250	5	1	5,450	0	16,750	1,250
Louisiana:								
New Orleans.....	78,900	61,675	21	15	121,616	519,701	277,492	620,740
Shreveport.....	33,066	29,140	28	16	77,391	16,849	182,155	73,103
Oklahoma:								
Muskogee.....	3,300	0	2	0	690	9,250	6,090	9,635
Oklahoma City.....	527,500	436,500	165	127	632,175	329,435	1,224,325	1,817,160
Okmulgee.....	0	0	0	0	125	0	375	
Tennessee:								
Knoxville.....	101,625	25,680	24	5	66,880	56,700	207,486	89,180
Memphis.....	230,100	179,660	69	58	39,390	163,116	343,491	583,658
Nashville.....	42,900	41,150	19	21	30,900	26,200	104,472	122,772
Texas:								
Austin.....	36,125	47,675	28	23	38,788	924,960	85,788	979,534
Beaumont.....	40,080	34,445	18	16	122,665	31,355	186,701	79,518
Dallas.....	112,440	100,150	32	36	313,240	229,410	526,042	513,419
Fort Worth.....	135,100	207,600	48	33	730,515	63,768	914,835	326,218
San Antonio.....	394,245	193,965	203	112	77,620	2,768,865	565,150	3,110,285

* Not reported.

TABLE 2.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, NOVEMBER AND DECEMBER, 1929—Continued

South Central States—Continued

City and State	New residential buildings				New nonresidential buildings		Total construction (including alterations and repairs)	
	Estimated cost		Families provided for in new dwellings		Estimated cost		Estimated cost	
	November, 1929	December, 1929	November, 1929	December, 1929	November, 1929	December, 1929	November, 1929	December, 1929
<i>Texas—Continued.</i>								
Waco.....	\$48,533	\$47,707	7	11	\$38,037	\$28,200	\$93,004	\$84,247
Wichita Falls.....	1,350	200	4	1	29,930	0	48,652	8,105
Total.....	1,910,734	1,460,267	721	501	2,399,262	5,235,419	5,031,383	8,618,203
Per cent of change.....		-23.6		-30.5		+118.2		+71.3

Mountain and Pacific States

<i>Arizona:</i>								
Phoenix.....	\$123,415	\$76,880	49	37	\$24,715	\$287,650	\$155,730	\$484,200
Tucson.....	32,600	35,550	17	13	41,590	200,275	80,150	242,560
<i>California:</i>								
Alameda.....	33,900	12,000	8	3	2,317	22,914	48,579	47,280
Berkeley.....	179,550	137,500	63	49	34,600	14,355	280,689	168,818
Fresno.....	65,950	37,950	18	11	16,281	9,079	121,135	113,574
Long Beach.....	423,050	563,700	127	203	565,985	501,975	1,045,205	1,093,880
Pasadena.....	101,825	158,350	19	20	63,626	38,330	220,251	281,330
Sacramento.....	317,900	71,900	65	18	20,895	13,900	381,240	115,219
San Diego.....	224,050	208,545	57	47	498,335	527,910	794,629	768,575
San Francisco.....	1,459,500	424,900	285	84	772,925	724,035	2,469,017	1,591,736
San Jose.....	60,700	47,950	16	15	52,400	14,910	126,710	77,730
Stockton.....	5,450	25,200	10	6	11,175	13,895	37,335	52,877
Vallejo.....	4,780	9,000	3	2	30,433	15,375	45,442	26,636
<i>Colorado:</i>								
Colorado Springs.....	5,000	12,100	1	4	8,800	14,475	50,465	30,910
Denver.....	178,000	326,200	48	92	252,300	165,100	547,150	589,450
Pueblo.....	17,700	4,000	7	1	200,852	13,165	238,988	28,749
<i>Montana:</i>								
Butte.....	0	0	0	0	36,800	7,366	46,349	7,566
Great Falls.....	53,200	5,075	15	4	27,651	91,932	96,266	133,507
<i>Oregon:</i>								
Portland.....	369,500	243,550	154	69	286,120	114,020	895,695	506,400
<i>Utah:</i>								
Ogden.....	12,000	2,000	5	1	74,650	3,000	142,350	7,000
Salt Lake City.....	119,300	113,700	34	27	57,105	124,145	205,675	376,738
<i>Washington:</i>								
Bellingham.....	6,300	15,600	6	7	11,500	3,275	25,030	24,645
Everett.....	8,750	7,500	6	3	22,495	37,460	40,605	54,355
Seattle.....	609,520	507,700	188	157	506,135	714,615	1,245,150	1,373,175
Spokane.....	67,350	21,700	23	7	30,140	80,486	130,603	123,981
Tacoma.....	58,000	186,000	19	67	328,305	28,240	427,285	238,615
Total.....	4,537,290	3,254,550	1,243	947	3,978,130	3,781,882	9,897,723	8,561,515
Per cent of change.....		-28.3		-23.8		-4.9		-13.5

WAGES AND HOURS OF LABOR

Hours and Earnings in Foundries and Machine Shops, 1929

IN 1929 the Bureau of Labor Statistics of the United States Department of Labor made a comprehensive study of hours of labor and earnings of wage earners in 399 representative iron foundries and in 508 machine shops in 28 States. The survey covered 131,882 wage earners, of whom 40,391 were employed in foundries and 91,491 in machine shops. Summaries of the results of this study, consisting of average full-time hours per week, average earnings per hour, and average full-time earnings per week, are given in this article. Details of the 1929 study will be available later in bulletin form.

The wage data here given were taken directly from the pay rolls, clock cards, and other records of the companies by agents of the bureau except in the case of a very few companies which made transcripts of their records for the bureau. In most instances the data are for representative pay periods in June, July, or August and are, therefore, representative of conditions in these months.

Table 1 shows average hours and earnings for all wage earners covered in foundries and in machine shops in 1923, 1925, 1927, and 1929 and index numbers of these averages, with the 1923 average as the base or 100 per cent.

Average full-time hours in foundries have decreased rather steadily since 1923, falling from 52.4 per week in that year to 51 hours per week in 1929. Thus, from 1923 to 1929 the decrease amounted to 1.4 hours per week or 2.7 per cent; between 1927 and 1929 the decrease was 0.1 hour per week or a little less than 0.2 per cent. In the machine shops the average full-time hours decreased from 50.8 per week in 1923 to 50.1 in 1927, but increased again to 50.3 hours per week in 1929.

Average earnings per hour in foundries increased from 55.8 cents in 1923 to 61 cents in 1925, and to 62.4 cents in 1927; no change took place between 1927 and 1929. Thus, between 1923 and 1929 the increase was 11.8 per cent. In machine shops earnings per hour increased from 55.9 cents in 1923 to 60.2 cents in 1925, to 62.5 cents in 1927, and to 63.8 cents in 1929. The increase between 1923 and 1929 amounted to 14.1 per cent, and between 1927 and 1929 to 2 per cent.

Full-time earnings per week in foundries increased from \$29.24 in 1923 to \$31.89 in 1927, but decreased to \$31.82 in 1929. Earnings per week did not increase or decrease in the same proportion as average earnings per hour because of the change from year to year in average full-time hours per week.

TABLE 1.—AVERAGE HOURS AND EARNINGS AND INDEX NUMBERS THEREOF, FOR ALL EMPLOYEES, 1923, 1925, 1927, AND 1929

[1923=100]

Year	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers of—		
						Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
Foundries:								
1923.....	351	32,166	52.4	\$0.558	\$29.24	100.0	100.0	100.0
1925.....	413	40,393	51.5	.610	31.42	98.3	109.3	107.5
1927.....	417	38,943	51.1	.624	31.89	97.5	111.8	109.1
1929.....	399	40,391	51.0	.624	31.82	97.3	111.8	108.8
Machine shops:								
1923.....	429	58,914	50.8	.559	28.40	100.0	100.0	100.0
1925.....	511	86,274	50.4	.602	30.34	99.2	107.7	106.8
1927.....	526	86,779	50.1	.625	31.31	98.6	111.8	110.2
1929.....	508	91,491	50.3	.638	32.09	99.0	114.1	113.0

In Table 2 data for all of the wage earners included in each occupation in each industry in 1929 are presented in comparison with similar figures for 1927. The averages in Table 2 are given separately for males and for females in each of the principal occupations in foundries and in machine shops for 1927 and 1929, for all males and for all females in all occupations in each industry, and also for both sexes combined—that is, for each industry as a whole.

As the table shows, full-time hours per week of males in foundries in 1929 ranged from 49.6 for hand molders, bench, to 52.2 for crane operators. Those of females ranged from 49.1 for core makers to 51.6 for laborers. Average earnings per hour of males in 1929 ranged from 49.0 cents for laborers to 83.3 cents for pattern makers, and those of females from 38.6 cents for laborers to 46.9 for core makers. Average full-time earnings per week of males in 1929 ranged from \$25.53 for laborers to \$41.73 for pattern makers, and those of females from \$19.92 for laborers to \$23.03 for core makers.

In machine shops the full-time hours of males in 1929 ranged from 49.4 for sheet-metal machine operators to 51.1 for boring-mill operators while those of females ranged from 47.6 for milling-machine operators to 51.0 for laborers. Average hourly earnings of males ranged from 46.9 cents for laborers to 88.8 cents for hammersmiths, while those of females ranged from 34.3 cents for grinding-machine operators to 50.4 cents for milling-machine operators. Full-time weekly earnings of males ranged from \$23.68 for laborers to \$44.67 for hammersmiths, while those of females ranged from \$17.36 for grinding-machine operators to \$23.99 for milling-machine operators.

TABLE 2.—AVERAGE HOURS AND EARNINGS IN FOUNDRIES AND MACHINE SHOPS, 1927 AND 1929, BY OCCUPATION AND SEX

Foundries

Occupation	Sex	Year	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time weekly earnings
Chippers and rough grinders	Male	1927	379	3,857	51.1	\$0.537	\$27.44
	do	1929	367	4,233	51.4	.538	27.65
	Female	1927	1	(1)	(1)	(1)	(1)
Coremakers	Male	1927	401	3,040	50.4	.755	38.05
	do	1929	387	3,370	49.9	.744	37.13
	Female	1927	41	324	48.4	.491	23.76
	do	1929	38	290	49.1	.469	23.03
Crane operators	Male	1927	242	875	52.6	.575	30.25
	do	1929	237	927	52.2	.582	30.38
Cupola tenders	do	1927	393	602	51.8	.620	32.12
	do	1929	364	500	51.0	.634	32.33
Laborers	do	1927	401	11,017	52.1	.491	25.58
	do	1929	384	10,980	52.1	.490	25.53
	Female	1929	7	74	51.6	.386	19.92
Molders, hand, bench	Male	1927	324	2,063	50.5	.789	39.84
	do	1929	321	2,098	49.6	.783	38.81
Molders, hand, floor	do	1927	402	5,375	49.9	.820	40.92
	do	1929	385	5,453	50.0	.828	41.40
Molders, machine	do	1927	220	3,102	50.4	.753	37.95
	do	1929	249	3,854	50.4	.734	36.99
Molders' helpers, floor	do	1927	247	1,820	51.2	.484	24.78
	do	1929	251	1,919	51.1	.502	25.65
Patternmakers	do	1927	259	1,512	50.3	.830	41.75
	do	1929	191	1,127	50.1	.833	41.73
Rough carpenters	do	1927	292	625	50.8	.600	30.91
	do	1929	270	509	50.7	.622	31.54
Sand blasters	do	1927	175	362	51.7	.591	30.55
	do	1929	183	337	51.9	.592	30.72
Other employees	do	1927	365	4,254	51.0	.587	29.94
	do	1929	360	4,725	51.2	.592	30.31
	Female	1927	15	107	50.6	.380	19.23
	do	1929	5	5	50.5	.492	24.85
All occupations	Male	1927	417	38,504	51.1	.626	31.99
	do	1929	399	40,032	51.0	.625	31.88
	Female	1927	42	439	49.0	.459	22.49
	do	1929	41	359	49.7	.451	22.41
All occupations, male and female		1927	417	38,943	51.1	.624	31.89
		1929	399	40,391	51.0	.624	31.82

Machine shops

Assemblers	Male	1927	368	8,019	50.1	\$0.653	\$32.72
	do	1929	335	7,670	50.1	.657	32.92
	Female	1927	14	120	49.5	.423	20.94
	do	1929	20	190	49.8	.441	21.90
Blacksmiths	Male	1927	406	845	50.2	.726	36.45
	do	1929	397	857	50.1	.742	37.17
Blacksmiths' helpers	do	1927	291	722	50.2	.525	26.36
	do	1929	285	800	49.9	.534	26.65
Boring-mill operators	do	1927	354	2,208	50.7	.727	36.86
	do	1929	372	2,333	51.1	.750	38.33
Crane operators	do	1927	218	865	51.2	.540	27.65
	do	1929	233	980	50.7	.555	28.14
	Female	1927	2	4	51.3	.431	22.11
	do	1929	2	7	50.7	.425	21.55
Drill-press operators	Male	1927	433	4,759	50.1	.605	30.31
	do	1929	440	5,291	50.3	.628	31.50
	Female	1927	22	121	49.4	.448	22.13
	do	1929	17	77	49.2	.410	20.17
Fitters and bench hands	Male	1927	332	6,061	49.5	.662	32.77
	do	1929	367	7,715	49.8	.677	33.71
	Female	1927	20	341	49.0	.411	20.14
	do	1929	14	175	48.6	.450	21.87
Grinding-machine operators	Male	1927	298	2,285	50.1	.668	33.47
	do	1929	313	2,888	51.0	.701	35.75
	Female	1927	5	15	48.6	.444	21.58
	do	1929	7	19	50.6	.343	17.36

¹ Included in total.

TABLE 2.—AVERAGE HOURS AND EARNINGS IN FOUNDRIES AND MACHINE SHOPS, 1927 AND 1929, BY OCCUPATION AND SEX—Continued

Machine shops—Continued

Occupation	Sex	Year	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time weekly earnings
Hammersmiths ¹	Male	1929	52	226	50.3	\$0.888	\$44.67
Helpers, not otherwise specified ²	do.	1929	322	3,443	50.2	.514	25.80
	Female	1929	1	(1)	(1)	(1)	(1)
Laborers	Male	1927	450	8,342	50.4	.456	22.98
	do.	1929	452	8,506	50.5	.469	23.68
	Female	1929	3	9	51.0	.370	18.87
Lathe operators, engine	Male	1927	414	5,964	50.2	.695	34.89
	do.	1929	421	5,640	50.3	.717	36.07
	Female	1927	2	7	48.4	.385	18.63
Lathe operators, turret	Male	1927	343	3,167	50.0	.675	33.75
	do.	1929	359	3,855	50.5	.700	35.35
	Female	1927	8	46	50.0	.549	27.45
	do.	1929	3	13	48.9	.432	21.12
Machinists	Male	1927	395	3,794	49.5	.728	36.04
	do.	1929	379	3,036	49.8	.739	36.80
Machinists' and tool makers' helpers	do.	1927	269	1,671	50.1	.510	25.55
	do.	1929	229	1,006	50.3	.504	25.35
Milling-machine operators	do.	1927	343	2,872	49.7	.685	34.04
	do.	1929	358	3,440	50.2	.697	34.99
	Female	1927	3	17	48.8	.489	23.86
	do.	1929	5	15	47.6	.504	23.99
Packers and craters	Male	1927	288	1,793	50.1	.537	26.90
	do.	1929	239	1,455	50.0	.547	27.35
	Female	1927	7	44	49.5	.389	19.26
	do.	1929	15	50	49.0	.371	18.18
Pattern makers	Male	1927	235	1,228	49.6	.841	41.71
	do.	1929	288	1,652	49.9	.846	42.22
Planer operators	do.	1927	339	1,818	50.5	.742	37.47
	do.	1929	344	1,963	50.7	.754	38.23
Polishers and buffers	do.	1927	109	580	49.4	.699	34.53
	do.	1929	115	587	50.1	.674	33.77
	Female	1927	3	6	49.0	.450	22.05
	do.	1929	1	(1)	(1)	(1)	(1)
Screw-machine operators	Male	1927	213	1,520	49.8	.664	33.07
	do.	1929	225	1,899	50.8	.707	35.92
	Female	1927	3	10	48.7	.435	21.18
	do.	1929	3	19	49.5	.436	21.58
Sheet-metal machine operators	Male	1927	137	867	50.2	.603	30.27
	do.	1929	149	1,136	49.4	.630	31.12
	Female	1927	12	167	48.7	.420	20.45
	do.	1929	9	63	48.9	.440	21.52
Tool makers	Male	1927	354	2,863	49.7	.756	37.57
	do.	1929	350	2,850	50.0	.780	39.00
Other precision machine operators	do.	1927	316	2,001	50.5	.659	33.28
	do.	1929	301	1,813	51.0	.655	33.41
	Female	1927	8	122	49.3	.330	16.27
	do.	1929	10	210	48.8	.427	20.84
Other skilled employees	Male	1927	468	11,113	50.1	.650	32.57
	do.	1929	470	10,786	50.3	.686	34.51
	Female	1927	27	317	47.7	.401	19.13
	do.	1929	25	407	50.0	.375	18.75
Other employees	Male	1927	487	9,352	50.3	.526	26.46
	do.	1929	467	8,108	50.3	.488	24.55
	Female	1927	20	133	49.3	.309	15.23
	do.	1929	18	298	49.0	.345	16.91
All occupations	Male	1927	526	85,309	50.1	.629	31.51
	do.	1929	508	89,935	50.3	.641	32.24
	Female	1927	50	1,470	48.9	.403	19.71
	do.	1929	56	1,556	49.3	.399	19.67
All occupations, male and female		1927	526	86,779	50.1	.625	31.31
		1929	508	91,491	50.3	.638	32.09

¹ Included in total.² Included with "other skilled employees" in 1927.³ Included with "other employees" in 1927.

It will be noted from a study of the data which are presented in Table 3 that average full-time hours of males in foundries for 1929 in the various States ranged from 45.9 to 56.4 per week, while those

for females ranged from 45.7 to 53 hours. Average earnings per hour of males ranged from 39.6 to 74.5 cents, while those of females ranged from 36.6 to 52.4 cents. Average full-time earnings per week for males ranged from \$20.95 to \$35.11, and those of females from \$17.75 to \$23.95.

In the machine shops the average weekly hours worked by males in 1929 ranged from 45.9 to 54.1, while those worked by females ranged from 47.1 to 51.6. Average hourly earnings of males ranged from 43.4 to 77.9 cents, and those of females from 35.7 to 42.4 cents. Full-time weekly earnings of males ranged from \$22.70 to \$35.76, and those of females from \$17.85 to \$21.31.

In the case of a few large foundries and machine shops the data cover only a representative portion of the total number of the wage earners of such establishments, as the inclusion of the total number would have given them undue weight and might have impaired the representative character of the averages for the States in which these establishments are located.

TABLE 3.—NUMBER OF ESTABLISHMENTS AND OF WAGE EARNERS, AND AVERAGE HOURS AND EARNINGS IN FOUNDRIES AND MACHINE SHOPS, 1927 AND 1929, BY SEX AND STATE

Foundries

Sex and State	Number of establishments		Number of employees		Average full-time hours per week		Average earnings per hour		Average full-time weekly earnings	
	1927	1929	1927	1929	1927	1929	1927	1929	1927	1929
<i>Males</i>										
Alabama.....	4	4	265	190	54.1	53.5	\$0.453	\$0.456	\$24.51	\$24.40
California.....	21	18	1,065	1,185	46.9	45.9	.740	.745	34.71	34.20
Colorado.....	3	3	266	307	47.0	49.2	.577	.596	27.12	29.32
Connecticut.....	16	16	1,537	1,629	52.2	50.8	.592	.611	30.90	31.04
Georgia.....	7	8	493	427	54.5	52.9	.391	.396	21.31	20.95
Illinois.....	28	28	2,835	3,636	49.5	50.5	.669	.665	33.12	33.58
Indiana.....	16	16	2,419	2,446	50.9	52.6	.589	.590	29.98	31.03
Iowa.....	11	9	755	959	53.2	52.9	.615	.614	32.72	32.48
Kansas.....	9	9	228	260	53.9	55.1	.474	.480	25.55	26.45
Kentucky.....	7	7	159	204	48.9	50.6	.500	.512	24.45	25.91
Louisiana.....	5	4	219	246	49.7	56.4	.481	.436	23.91	24.59
Maine.....	4	4	182	248	50.8	50.7	.589	.555	29.92	28.14
Maryland.....	8	7	486	421	52.1	50.9	.554	.558	28.86	28.40
Massachusetts.....	28	28	3,141	2,408	49.6	48.7	.677	.681	33.58	33.16
Michigan.....	39	37	4,389	4,334	51.7	51.9	.640	.644	33.09	33.42
Minnesota.....	5	6	439	457	53.2	52.0	.596	.555	31.71	28.86
Missouri.....	12	15	667	764	51.4	52.1	.629	.610	32.33	31.78
New Hampshire.....	8	6	195	143	49.6	50.9	.635	.599	31.50	30.49
New Jersey.....	17	16	2,380	2,353	52.0	50.6	.627	.636	32.60	32.18
New York.....	25	28	2,747	3,392	50.5	50.1	.657	.647	33.18	32.41
Ohio.....	52	44	4,550	4,323	52.2	51.8	.630	.625	32.89	32.38
Oregon.....	7	5	224	208	45.3	46.1	.659	.677	29.85	31.21
Pennsylvania.....	40	39	5,066	5,285	51.1	51.6	.625	.608	31.94	31.37
Rhode Island.....	8	9	731	1,066	51.5	51.5	.611	.612	31.47	31.52
Tennessee.....	7	7	419	382	49.5	49.2	.470	.461	23.27	22.68
Texas.....	10	6	439	278	51.2	49.8	.470	.488	24.06	24.30
Washington.....	7	7	271	316	46.9	48.3	.693	.727	32.50	35.11
Wisconsin.....	13	13	1,917	2,165	52.3	51.2	.636	.644	33.26	32.97
Total.....	417	390	38,504	40,032	51.1	51.0	.626	.625	31.90	31.88
<i>Females</i>										
Georgia.....		1		(1)		(1)		(1)		(1)
Illinois.....	4	5	60	29	48.8	49.0	.537	.447	26.21	21.90
Indiana.....	2	2	59	39	50.0	50.0	.416	.434	20.80	21.70
Iowa.....	1		(1)		(1)		(1)			
Kentucky.....	2	2	5	3	47.0	50.0	.446	.412	20.96	20.60
Massachusetts.....	2	1	7	(1)	48.0	(1)	.474	(1)	22.75	(1)
Michigan.....	8	10	84	105	51.6	51.5	.434	.427	22.39	21.99

¹ Included in total.

TABLE 3.—NUMBER OF ESTABLISHMENTS AND OF WAGE EARNERS, AND AVERAGE HOURS AND EARNINGS IN FOUNDRIES AND MACHINE SHOPS, 1927 AND 1929, BY SEX AND STATE—Continued

Foundries—Continued

Sex and State	Number of establishments		Number of employees		Average full-time hours per week		Average earnings per hour		Average full-time weekly earnings	
	1927	1929	1927	1929	1927	1929	1927	1929	1927	1929
<i>Females—Continued</i>										
Minnesota.....	1	—	(1)	—	(1)	—	(1)	—	(1)	—
New Jersey.....	4	4	57	50	49.2	49.8	\$0.451	\$0.466	\$22.19	\$23.21
New York.....	7	5	63	54	45.6	48.8	.501	.489	22.85	23.86
Ohio.....	2	1	23	(1)	49.0	(1)	.406	(1)	19.89	(1)
Pennsylvania.....	3	2	33	19	48.7	48.5	.419	.366	20.41	17.75
Rhode Island.....	2	3	10	11	50.6	53.0	.405	.408	20.49	21.62
Wisconsin.....	4	5	31	37	46.9	45.7	.517	.524	24.25	23.95
Total.....	42	41	439	359	49.0	49.7	.459	.451	22.49	22.41
<i>Males and females</i>										
Alabama.....	4	4	265	190	54.1	53.5	.453	.456	24.51	24.40
California.....	21	18	1,065	1,185	46.9	45.9	.740	.745	34.71	34.20
Colorado.....	3	3	266	307	47.0	49.2	.577	.596	27.12	29.32
Connecticut.....	16	16	1,537	1,629	52.2	50.8	.592	.611	30.90	31.04
Georgia.....	7	8	493	429	54.5	52.9	.391	.395	21.31	20.90
Illinois.....	28	28	2,895	3,065	49.5	50.5	.666	.663	32.97	33.48
Indiana.....	16	16	2,478	2,485	50.9	52.5	.586	.587	29.83	30.82
Iowa.....	11	9	758	959	53.2	52.9	.614	.614	32.66	32.48
Kansas.....	9	9	228	230	53.9	55.1	.474	.480	25.55	26.45
Kentucky.....	7	7	164	207	48.8	50.6	.498	.510	24.30	25.81
Louisiana.....	5	4	219	246	49.7	56.4	.481	.436	23.91	24.50
Maine.....	4	4	182	248	50.8	50.7	.589	.555	29.92	28.14
Maryland.....	8	7	486	421	52.1	50.9	.554	.558	28.86	28.40
Massachusetts.....	28	28	3,148	2,410	49.6	48.7	.677	.680	33.58	33.12
Michigan.....	39	37	4,473	4,439	51.7	51.9	.636	.640	32.88	33.22
Minnesota.....	5	6	443	457	53.1	52.0	.594	.555	31.54	28.86
Missouri.....	12	15	667	764	51.4	52.1	.629	.610	32.33	31.78
New Hampshire.....	8	6	195	143	49.6	50.9	.635	.599	31.50	30.49
New Jersey.....	17	16	2,437	2,403	51.9	50.5	.623	.633	32.33	31.97
New York.....	25	28	2,810	3,446	50.4	50.1	.654	.644	32.96	32.26
Ohio.....	52	44	4,573	4,331	52.2	51.8	.629	.625	32.83	32.38
Oregon.....	7	5	224	208	45.3	46.1	.659	.677	29.85	31.21
Pennsylvania.....	40	39	5,119	5,304	51.1	51.6	.624	.607	31.89	31.32
Rhode Island.....	8	9	741	1,077	51.5	51.5	.608	.610	31.31	31.42
Tennessee.....	7	7	419	382	49.5	49.2	.470	.461	23.27	22.68
Texas.....	10	6	439	278	51.2	49.8	.470	.488	24.06	24.30
Washington.....	7	7	271	316	46.9	48.3	.693	.727	32.50	35.11
Wisconsin.....	13	13	1,948	2,202	52.2	51.1	.634	.643	33.09	32.86
Total.....	417	399	38,943	40,391	51.1	51.0	.624	.624	31.89	31.82

Machine shop

<i>Males</i>										
Alabama.....	6	6	365	284	54.2	50.0	\$0.543	\$0.551	\$29.43	\$27.55
California.....	27	23	2,239	2,133	46.0	45.9	.746	.719	34.32	35.76
Colorado.....	—	2	—	654	—	48.1	—	.619	—	29.77
Connecticut.....	19	19	3,416	4,104	50.9	51.0	.639	.639	32.53	32.59
Georgia.....	8	8	336	332	54.3	52.3	.433	.434	23.51	22.70
Illinois.....	38	36	10,086	11,149	49.7	50.0	.685	.691	34.04	34.55
Indiana.....	16	16	2,944	2,965	50.9	51.0	.566	.564	28.81	28.76
Iowa.....	9	6	773	1,032	52.8	54.1	.515	.552	27.19	29.86
Kansas.....	10	10	309	436	51.1	54.1	.518	.508	26.47	27.48
Kentucky.....	9	10	407	624	47.3	50.7	.554	.526	26.20	26.67
Louisiana.....	6	5	252	217	51.5	54.1	.566	.489	29.15	26.45
Maine.....	4	4	466	650	47.8	49.0	.555	.544	26.53	26.66
Maryland.....	8	7	725	705	47.7	50.0	.605	.656	28.86	32.80
Massachusetts.....	40	38	7,707	7,673	48.9	49.3	.611	.630	29.88	31.06
Michigan.....	36	36	5,626	5,580	51.2	51.9	.627	.639	32.10	33.16
Minnesota.....	6	8	656	856	50.1	50.4	.593	.578	29.71	29.13
Missouri.....	21	19	1,343	1,153	51.3	51.4	.576	.574	29.55	29.50
New Hampshire.....	9	6	657	535	50.2	49.0	.638	.625	32.03	30.63
New Jersey.....	31	28	4,016	3,624	49.5	49.5	.647	.685	32.03	33.91

¹ Included in total.

TABLE 3.—NUMBER OF ESTABLISHMENTS AND OF WAGE EARNERS, AND AVERAGE HOURS AND EARNINGS IN FOUNDRIES AND MACHINE SHOPS, 1927 AND 1929, BY SEX AND STATE—Continued

Machine shop—Continued

Sex and State	Number of establishments		Number of employees		Average full-time hours per week		Average earnings per hour		Average full-time weekly earnings	
	1927	1929	1927	1929	1927	1929	1927	1929	1927	1929
<i>Males—Continued</i>										
New York	26	32	8,740	8,958	48.5	48.7	\$0.662	\$0.683	\$32.11	\$33.26
Ohio	89	85	13,980	13,965	50.3	50.1	.619	.646	31.14	32.36
Oregon	6	6	313	396	45.0	47.2	.701	.691	31.55	32.62
Pennsylvania	45	48	11,977	12,537	51.2	51.7	.622	.615	31.85	31.80
Rhode Island	13	10	1,851	3,104	50.4	50.8	.594	.592	29.94	30.07
Tennessee	8	8	458	540	49.2	50.8	.540	.550	26.57	27.94
Texas	14	10	853	742	49.8	47.6	.531	.583	26.44	27.75
Washington	7	7	481	732	47.2	47.6	.714	.732	33.70	34.84
Wisconsin	15	15	4,333	4,255	52.6	51.6	.602	.639	31.67	32.97
Total	526	508	85,309	89,935	50.1	50.3	.629	.641	31.51	32.24
<i>Females</i>										
Connecticut	1	2	(1)	7	(1)	50.0	(1)	.424	(1)	21.20
Illinois	2	6	47	56	51.6	50.7	.391	.377	20.18	19.11
Indiana	1	3	(1)	49	(1)	50.0	(1)	.357	(1)	17.85
Kentucky	1	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Maine	1		(1)		(1)		(1)		(1)	
Massachusetts	8	10	84	95	47.9	47.1	.434	.414	20.79	19.50
Michigan	16	10	345	261	50.2	51.6	.467	.411	23.44	21.21
New Hampshire	1	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
New Jersey	2	2	81	45	50.0	50.0	.377	.397	18.85	19.85
New York	3	6	277	411	48.1	47.8	.399	.408	18.71	19.50
Ohio	6	7	287	302	49.3	49.2	.345	.382	17.01	18.79
Pennsylvania	5	5	192	153	48.1	48.4	.398	.423	19.14	20.47
Rhode Island	2	2	67	111	43.0	51.1	.445	.417	19.14	21.31
Tennessee		1		(1)		(1)		(1)		(1)
Wisconsin	1		(1)		(1)		(1)		(1)	
Total	50	56	1,470	1,556	48.9	49.3	.403	.399	19.71	19.67
<i>Males and females</i>										
Alabama	6	6	365	284	54.2	50.0	.543	.551	29.43	27.55
California	27	23	2,239	2,133	46.0	45.9	.746	.779	34.32	35.76
Colorado		2		654		43.1		.619		29.77
Connecticut	19	19	3,419	4,111	50.9	51.0	.639	.639	32.53	32.59
Georgia	8	8	336	332	54.3	52.3	.433	.434	23.51	22.70
Illinois	38	36	10,133	11,205	49.7	50.0	.684	.689	33.99	34.45
Indiana	16	16	2,976	3,014	50.8	51.0	.564	.561	28.65	28.61
Iowa	9	6	773	1,032	52.8	54.1	.515	.552	27.19	29.86
Kansas	10	10	309	436	51.1	54.1	.518	.508	26.47	27.48
Kentucky	9	10	429	652	47.4	50.9	.540	.512	25.60	26.06
Louisiana	6	5	252	217	51.5	54.1	.566	.489	29.15	26.45
Maine	4	4	467	650	47.8	49.0	.554	.544	26.48	26.66
Maryland	8	7	725	705	47.7	50.0	.605	.656	28.86	32.80
Massachusetts	40	38	7,791	7,768	48.9	49.3	.609	.628	29.78	30.96
Michigan	36	36	5,971	5,841	51.2	51.8	.619	.630	31.69	32.63
Minnesota	6	8	656	856	50.1	50.4	.593	.578	29.71	29.13
Missouri	21	19	1,343	1,153	51.3	51.4	.576	.574	29.55	29.50
New Hampshire	9	6	685	572	50.2	49.0	.629	.610	31.58	29.89
New Jersey	31	28	4,097	3,609	49.5	49.5	.642	.682	31.78	33.76
New York	26	32	9,017	9,369	48.5	48.6	.654	.672	31.72	32.66
Ohio	89	85	14,267	14,267	50.3	50.1	.614	.641	30.88	32.11
Oregon	6	6	313	396	45.0	47.2	.701	.691	31.55	32.62
Pennsylvania	45	48	12,169	12,690	51.1	51.7	.619	.612	31.63	31.64
Rhode Island	13	10	1,918	3,215	50.2	50.8	.590	.586	29.62	29.77
Tennessee	8	8	458	541	49.2	50.8	.540	.550	26.57	27.94
Texas	14	10	853	742	49.8	47.6	.531	.583	26.44	27.75
Washington	7	7	481	732	47.2	47.6	.714	.732	33.70	34.84
Wisconsin	15	15	4,337	4,255	52.6	51.6	.602	.639	31.67	32.97
Total	526	508	86,779	91,491	50.1	50.3	.625	.638	31.31	32.09

1 Included in total.

Table 4 presents the data, classified by States, for each of four of the principal occupations in foundries and four in machine shops.

TABLE 4.—AVERAGE HOURS AND EARNINGS FOR 8 SPECIFIED OCCUPATIONS IN FOUNDRIES AND MACHINE SHOPS, 1929, BY OCCUPATION, SEX, AND STATE

Foundry

State	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time weekly earnings	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time weekly earnings
Laborers, male						Molders, hand, floor, male				
Alabama	4	64	53.4	\$0.297	\$15.86	4	39	53.5	\$0.727	\$38.89
California	18	295	46.4	.585	27.14	18	207	44.9	.966	43.37
Colorado	3	55	51.0	.424	21.62	3	33	48.4	.849	41.09
Connecticut	16	481	51.7	.501	25.90	16	286	48.2	.801	38.61
Georgia	8	157	54.5	.261	14.22	8	54	50.7	.742	37.62
Illinois	28	1,067	50.6	.541	27.37	23	438	49.5	.864	42.77
Indiana	16	865	53.9	.462	24.90	16	347	51.7	.768	39.71
Iowa	9	247	53.9	.483	26.03	9	129	51.1	.802	40.98
Kansas	9	63	54.2	.369	20.00	9	54	54.4	.632	34.38
Kentucky	6	57	50.1	.387	19.39	7	51	51.5	.634	32.65
Louisiana	4	106	56.6	.293	16.58	4	52	56.5	.731	41.30
Maine	1	(1)	(1)	(1)	(1)	4	46	48.2	.696	33.55
Maryland	7	91	53.7	.391	21.00	7	81	49.0	.790	38.71
Massachusetts	26	493	48.7	.518	25.23	28	312	48.4	.918	44.43
Michigan	33	1,147	52.7	.533	28.09	34	435	51.5	.804	41.41
Minnesota	6	114	53.1	.449	23.84	6	62	52.0	.715	37.18
Missouri	15	169	53.7	.431	23.14	13	146	51.8	.785	40.66
New Hampshire	6	17	50.5	.456	23.03	6	37	51.1	.714	36.49
New Jersey	14	723	50.8	.499	25.35	16	246	50.2	.886	44.48
New York	27	1,000	51.5	.534	27.50	27	370	48.9	.847	41.42
Ohio	44	1,356	53.4	.467	24.94	40	657	50.4	.878	44.25
Oregon	5	38	46.1	.514	23.70	5	32	46.3	.852	39.45
Pennsylvania	38	1,350	52.7	.468	24.66	37	708	50.7	.805	40.81
Rhode Island	9	230	52.2	.514	26.83	8	131	50.4	.775	39.06
Tennessee	7	100	49.1	.291	14.29	7	74	49.0	.750	36.75
Texas	5	56	52.8	.343	18.11	6	55	47.4	.728	34.51
Washington	7	62	48.5	.573	27.79	7	63	48.4	.882	42.69
Wisconsin	13	514	53.1	.518	27.36	12	308	48.7	.863	42.03
Total	384	10,980	52.1	.490	25.53	385	5,453	50.0	.828	41.40
Molders, machine, male						Pattern makers, male				
Alabama	1	(1)	(1)	(1)	(1)	3	10	52.7	\$0.767	\$40.42
California	8	20	46.7	\$0.685	\$31.99	10	32	44.8	1.094	48.83
Colorado	2	22	49.4	.647	31.96	3	20	44.4	.985	43.73
Connecticut	8	118	55.8	.667	37.22	5	12	55.4	.703	38.95
Georgia	3	18	52.7	.630	33.20	6	12	50.7	.802	40.66
Illinois	17	387	50.1	.780	39.08	22	149	50.2	.797	40.01
Indiana	11	244	50.9	.716	36.44	9	54	52.0	.963	50.08
Iowa	6	89	52.1	.707	36.83	6	17	52.5	.730	38.33
Kansas	5	17	54.7	.588	32.16	6	8	55.1	.824	45.40
Kentucky	2	16	50.0	.519	25.95	1	(1)	(1)	(1)	(1)
Louisiana	2	3	58.0	.397	23.03	1	(1)	(1)	(1)	(1)
Maine	1	(1)	(1)	(1)	(1)	1	(1)	(1)	(1)	(1)
Maryland	4	39	51.2	.609	31.18	6	24	48.8	.796	38.84
Massachusetts	23	284	48.4	.794	38.43	8	124	48.4	.731	35.38
Michigan	25	566	51.5	.679	34.97	21	151	50.6	.901	45.59
Minnesota	4	34	51.2	.633	32.41	2	6	49.8	.714	35.56
Missouri	9	44	50.6	.710	35.93	10	33	49.2	.991	48.76
New Hampshire	2	10	52.8	.585	30.89	3	4	53.0	.717	38.00
New Jersey	14	180	50.4	.817	41.18	11	102	50.4	.864	43.55
New York	20	434	49.5	.723	35.79	11	103	49.9	.820	40.92
Ohio	26	427	49.4	.814	40.21	12	70	50.3	.820	41.25
Oregon	1	(1)	(1)	(1)	(1)	3	7	45.1	.934	42.12
Pennsylvania	29	413	49.8	.724	36.06	14	110	51.0	.766	39.07
Rhode Island	8	176	52.2	.717	37.43	1	(1)	(1)	(1)	(1)
Tennessee	2	7	49.1	.481	23.62	2	6	49.7	.936	46.52
Texas	2	12	46.3	.656	30.47	4	6	47.9	.883	42.30
Washington	3	11	48.0	.786	37.73	4	16	48.0	1.029	49.39
Wisconsin	11	255	50.2	.759	38.10	6	35	52.6	.762	40.06
Total	249	3,854	50.4	.734	36.99	191	1,127	50.1	.833	41.73

¹ Included in total.

TABLE 4.—AVERAGE HOURS AND EARNINGS FOR 8 SPECIFIED OCCUPATIONS IN
FOUNDRIES AND MACHINE SHOPS, 1929, BY OCCUPATION, SEX, AND STATE—
Continued*Machine shops*

State	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time weekly earnings	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time weekly earnings
	Fitters and bench hands, male					Laborers, male				
Alabama.....	2	13	50.3	\$0.094	\$34.91	5	58	50.7	\$0.209	\$15.16
California.....	20	204	45.0	.848	38.16	17	180	46.1	.573	26.42
Colorado.....	2	41	48.1	.628	30.21	2	68	48.0	.466	22.37
Connecticut.....	19	659	51.1	.667	34.08	19	360	51.0	.476	24.28
Georgia.....	2	4	50.1	.588	29.46	7	68	52.1	.240	12.50
Illinois.....	29	788	49.4	.732	36.16	28	1,313	49.8	.509	25.35
Indiana.....	13	163	51.1	.627	32.04	16	330	50.9	.430	21.89
Iowa.....	4	19	53.2	.624	33.20	6	167	54.0	.442	23.87
Kansas.....	3	16	54.4	.524	28.51	8	75	54.4	.366	19.91
Kentucky.....	9	57	50.2	.631	31.68	7	50	50.5	.372	18.79
Louisiana.....	1	(1)	(1)	(1)	(1)	3	55	58.0	.280	16.24
Maine.....	2	17	48.9	.493	24.11	4	39	48.3	.420	20.29
Maryland.....	1	(1)	(1)	(1)	(1)	5	40	51.0	.429	21.88
Massachusetts.....	27	356	49.0	.660	32.34	35	619	49.6	.484	24.01
Michigan.....	23	283	51.4	.657	33.77	31	480	51.9	.479	24.86
Minnesota.....	4	17	49.6	.619	30.70	8	88	50.8	.426	21.64
Missouri.....	10	80	52.0	.555	28.86	12	103	52.0	.408	21.22
New Hampshire.....	3	35	49.2	.664	32.67	5	29	48.5	.462	22.41
New Jersey.....	24	545	49.2	.734	36.11	26	406	49.5	.507	25.10
New York.....	27	936	48.8	.730	35.62	30	737	48.7	.511	24.89
Ohio.....	61	1,786	49.3	.648	31.95	82	1,205	49.8	.463	23.06
Oregon.....	3	19	47.2	.747	35.26	4	7	46.3	.509	23.57
Pennsylvania.....	43	899	51.0	.649	33.10	48	1,337	52.0	.443	23.04
Rhode Island.....	8	340	50.5	.593	29.95	10	212	50.5	.458	23.13
Tennessee.....	3	11	48.2	.653	31.47	7	89	50.6	.333	16.85
Texas.....	5	34	48.2	.734	35.38	7	74	48.6	.404	19.63
Washington.....	6	62	47.6	.760	36.18	5	32	48.3	.529	25.55
Wisconsin.....	13	324	52.0	.658	34.22	15	285	52.1	.482	25.11
Total.....	367	7,715	49.8	.677	33.71	452	8,506	50.5	.469	23.68
	Lathe operators, engine, male					Toolmakers, male				
Alabama.....	3	29	51.4	\$0.736	\$37.52	2	2	49.5	\$0.751	\$37.17
California.....	20	248	45.5	.859	39.08	15	77	45.9	.983	45.12
Colorado.....	2	28	48.1	.720	34.63	2	25	48.0	.761	36.53
Connecticut.....	18	336	51.2	.674	34.51	17	145	51.4	.800	41.58
Georgia.....	5	38	51.7	.597	30.86	4	10	51.8	.717	37.14
Illinois.....	30	613	50.7	.770	39.04	26	366	49.9	.783	39.07
Indiana.....	13	90	51.4	.671	34.49	14	76	50.4	.758	38.20
Iowa.....	6	64	53.2	.626	33.30	2	15	54.4	.684	37.21
Kansas.....	5	34	51.1	.685	35.00	4	7	54.0	.649	35.05
Kentucky.....	7	27	48.7	.644	31.36	6	13	50.2	.769	38.60
Louisiana.....	3	16	54.3	.670	36.38					
Maine.....	3	22	47.3	.579	27.39	4	11	48.9	.680	33.25
Maryland.....	5	39	51.7	.655	33.86	4	73	49.7	.798	39.66
Massachusetts.....	31	468	49.9	.654	32.63	31	364	50.3	.737	37.07
Michigan.....	27	316	51.2	.679	34.76	27	144	51.8	.827	42.84
Minnesota.....	8	52	50.7	.658	33.36	7	22	51.3	.695	35.65
Missouri.....	14	128	49.9	.689	34.38	11	28	51.5	.680	35.02
New Hampshire.....	5	44	49.3	.650	32.05	2	19	48.3	.778	37.58
New Jersey.....	24	212	49.7	.709	38.22	13	88	49.5	.797	39.45
New York.....	29	487	48.6	.777	37.76	27	367	48.4	.826	39.98
Ohio.....	74	953	50.5	.702	35.45	58	463	49.9	.784	39.12
Oregon.....	6	52	47.1	.793	37.35	3	4	45.0	.854	38.43
Pennsylvania.....	42	687	52.1	.732	38.14	37	197	51.1	.753	38.48
Rhode Island.....	9	208	51.6	.614	31.68	8	178	51.0	.686	34.99
Tennessee.....	6	35	50.8	.717	36.42	3	10	50.8	.800	40.64
Texas.....	6	125	46.9	.704	33.02	4	22	47.3	.853	40.35
Washington.....	6	69	47.5	.788	37.43	6	14	47.7	.830	39.59
Wisconsin.....	14	220	51.3	.722	37.04	13	110	50.7	.759	38.48
Total.....	421	5,640	50.3	.717	36.07	350	2,850	50.0	.780	39.00

¹ Included in total.

Recent Changes in Wages and Hours of Labor

INFORMATION received by the Bureau of Labor Statistics regarding recent wage changes is presented below in two distinct groups: Part 1 relates to manufacturing establishments only, the data being reported direct to the bureau by the same establishments that report monthly figures regarding volume of employment; part 2 presents data obtained from new trade agreements and other miscellaneous sources. Effort is made to avoid duplication of data as between parts 1 and 2, but this is not always possible.

Part 1. Wage Changes reported by Manufacturing Establishments, November, 1929

THIRTY-FIVE establishments in 13 industries reported wage-rate increases during the month ending December 15, 1929. These increases averaged 9.2 per cent and affected 8,610 employees, or 59 per cent of all employees in the establishments concerned.

Twenty-three establishments in 11 industries reported wage-rate decreases during the same period. These decreases averaged 9 per cent and affected 1,622 employees, or 71 per cent of all employees in the establishments concerned.

WAGE ADJUSTMENTS OCCURRING BETWEEN NOVEMBER 15 AND DECEMBER 15, 1929

Industry	Establishments		Per cent of increase or decrease in wage rate		Employees affected		
	Total number reporting	Number reporting increase or decrease in wage rates	Range	Average	Total number	Per cent of employees	
						In establishments reporting increase or decrease in wage rates	In all establishments reporting
			Increases				
Hosiery and knit goods.....	318	4	5.0	5.0	500	62	1
Silk goods.....	275	1	7.0	7.0	37	7	(1)
Rayon.....	18	1	5.0	5.0	1,000	50	4
Foundry and machine-shop products.....	1,025	2	2.7- 8.7	4.5	397	71	(1)
Machine tools.....	149	2	4.4- 7.3	4.8	26	20	(1)
Lumber, sawmills.....	628	1	6.4	6.4	262	100	(1)
Furniture.....	408	1	7.0	7.0	65	100	(1)
Paper boxes.....	177	1	10.0	10.0	27	18	(1)
Printing, book and job.....	379	7	2.0-10.0	3.2	210	7	(1)
Printing, newspapers.....	450	8	1.1- 3.5	3.3	299	20	(1)
Brick, tile, and terra cotta.....	608	1	10.0	10.0	46	90	(1)
Glass.....	132	1	9.5	9.5	746	100	2
Automobiles.....	209	5	6.0-20.0	11.7	4,995	100	2
			Decreases				
Slaughtering and meat packing.....	202	1	10.0	10.0	107	100	(1)
Silk goods.....	275	1	10.0	10.0	55	100	(1)
Woolen and worsted goods.....	179	1	10.0	10.0	181	100	(1)
Carpets and rugs.....	27	2	5.0	5.0	150	34	1
Lumber, sawmills.....	628	4	6.0-10.0	6.6	350	87	(1)
Lumber, millwork.....	318	2	10.0	10.0	55	83	(1)
Paper and pulp.....	203	1	10.0	10.0	150	100	(1)
Brick, tile, and terra cotta.....	608	8	10.0-20.0	11.3	301	95	1
Pottery.....	112	1	10.0	10.0	28	85	(1)
Automobiles.....	209	1	10.0	10.0	75	49	(1)
Carriages and wagons.....	47	1	10.0	10.0	170	100	15

¹ Less than one-half of 1 per cent.

Part 2.—Wage Changes Reported by Trade-Unions Since October, 1929

THE changes shown in Tables 2 and 3 cover workers in various trade groups. In the building-trades group increases ranged from 3½ cents per hour for carpenters in Sioux City, Iowa, to 25 cents per hour in Sedalia, Mo., the majority receiving 12½ cents per hour or more. Printing-trades increases ranged from \$1 to \$4.50 per week; those of railroad workers from 2 to 5 cents per hour; and those of steamboat men from \$5 per month for cooks, deck hands, oilers, and firemen to \$10 per month for captains, engineers, and assistants, pilots and mates. Other smaller groups or individual trades increased either in time or piece rates.

TABLE 2.—RECENT UNION WAGE CHANGES, BY INDUSTRY, OCCUPATION, AND LOCALITY, OCTOBER, 1929, TO JANUARY, 1930

Industry, occupation, and locality	Date of change	Rate of wage		Hours per week	
		Before change	After change	Before change	After change
Building trades:		<i>Per hour</i>	<i>Per hour</i>		
Carpenters, Sioux City, Iowa.....	Jan. 1	\$1.06¼	\$1.09¾	44	44
Cement finishers, Houston, Tex.....	Nov. 24	1.25	1.37½	44	40
Inside wiremen, Rock Island, Ill.....	Jan. 1	1.18¾	1.25	48	48
Painters, Cleveland, Ohio.....	Oct. 1	1.25	1.31¼	44	40
Plasterers—					
Houston, Tex.....	Nov. 24	1.62½	1.75	44	40
Sedalia, Mo.....	Oct. 1	1.25	1.50	44	44
Tacoma, Wash.....	do.	1.37½	1.50	44	44
Sheet-metal workers, Washington, D. C.....	Jan. 1	1.43¾	1.50	44	44
Structural iron workers, Seattle, Wash.....	do.	1.12½	1.25	44	40
All building trades, Oakland, Calif.....	do.	(1)	(1)	44	40
Chauffeurs and teamsters: Laundry drivers, Chicago, Ill.....	Nov. 1	<i>Per week</i> 37.50	<i>Per week</i> 38.50	(1)	(1)
Clothing: Pants and coat makers, Vineland, N. J.....	Nov. 15	(1)	(2)	48	44
Upholsterers: New York—Interior decorating.....	Oct. 25	<i>Per day</i> 6.60	<i>Per day</i> 7.26	(1)	(1)
Mining: Terre Haute, Ind.....	(1)	2.50	6.10	48	48
Motion-picture operators, actors, and theatrical workers: San Diego, Calif., operators.....	Dec. 1	<i>Per week</i> 55.00	<i>Per week</i> 75.00	37½	36
Printing and publishing:					
Compositors—					
Brooklyn, N. Y.—					
Newspaper, day.....	Oct. 1	65.00	68.50	39	39
Newspaper, night.....	do.	68.00	71.50	36	36
Job work, day.....	do.	53.00	55.00	42	42
Job work, night.....	do.	56.00	58.00	40	40
Butte, Mont.—					
Newspaper, day.....	do.	43.50	48.00	45	45
Newspaper, night.....	do.	46.50	51.00	(1)	(1)
Job work.....	do.	41.00	45.50	44	44
Erie, Pa.—					
Newspaper, day.....	do.	50.00	50.00	48	45
Newspaper, night.....	do.	53.00	53.00	48	45
Lawrence, Mass., newspaper.....	Nov. 1	43.00	43.00	48	45
Photo-engravers, Portland, Oreg.....	Jan. 1	57.50	60.00	44	44
Stereotypers:					
Plainfield, N. J., newspaper.....	do.	<i>Per day</i> 8.83¾	<i>Per day</i> 9.00	48	48
Schenectady, N. Y.—					
Newspaper, day.....	Nov. 1	49.00	50.00	48	45
Newspaper, night.....	do.	52.50	53.50	48	45
Spokane, Wash.....	Jan. 4	42.00	43.50	48	48

¹ Not reported.² Increase, 5 per cent.³ Minimum.

TABLE 2.—RECENT UNION WAGE CHANGES, BY INDUSTRY, OCCUPATION, AND LOCALITY, OCTOBER, 1929, TO JANUARY, 1930—Continued

Industry, occupation, and locality	Date of change	Rate of wage		Hours per week	
		Before change	After change	Before change	After change
Railway workers:		<i>Per hour</i>	<i>Per hour</i>		
Birmingham, Ala.—					
Signal maintainers.....	Nov. 1	\$0.78	\$0.80	48	48
Assistant signalmen.....	do	.54	.56	48	48
Signal helpers.....	do	.52	.54	48	48
Johnsonburg, Pa.—					
Signalmen, maintainers.....	Dec. 1	.75	.80	48	48
Helpers.....	do	.50	.55	48	48
Macon, Ga.—					
Signalmen and maintainers.....	do	¹ .75	¹ .80	48	48
Helpers.....	do	.49	.54	48	48
Assistants.....	do	¹ .51	¹ .56	48	48
Nashville, Tenn.—					
Signalmen.....	Nov. 1	.78	.80	48	48
Assistants.....	do	.68	.70	48	48
Helpers.....	do	.49	.51	48	48
Steamboatmen:		<i>Per month</i>	<i>Per month</i>		
New York, railroad-owned boats, captains, pilots, engineers, etc.....	(1)	(1)	⁴ 5.00	(1)	(1)
New York Harbor, towboats, single crew, self-propelled vessels other than those engaged in transport work—					
Class A—					
Captains.....	Oct. 15	180.00	190.00	(1)	60
Engineers.....	do	170.00	180.00	(1)	60
Class B—					
Captains.....	do	170.00	180.00	(1)	60
Engineers.....	do	160.00	170.00	(1)	60
Class C—					
Captains.....	do	160.00	170.00	(1)	60
Engineers.....	do	150.00	160.00	(1)	60
Firemen.....	do	95.00	100.00	(1)	60
Do.....	do	85.00	90.00	(1)	60
Deck hands.....	do	85.00	90.00	(1)	60
Cooks.....	do	85.00	90.00	(1)	60
Double crew, self-propelled vessels engaged in general towing and harbor work—					
Class A—					
Captains.....	do	220.00	230.00	(1)	60
Engineers.....	do	210.00	220.00	(1)	60
Pilot-mates.....	do	180.00	190.00	(1)	60
Assistant engineers.....	do	180.00	190.00	(1)	60
Class B—					
Captains.....	do	210.00	220.00	(1)	60
Engineers.....	do	200.00	210.00	(1)	60
Pilot-mates.....	do	170.00	180.00	(1)	60
Assistant engineers.....	do	170.00	180.00	(1)	60
Firemen.....	do	90.00	95.00	(1)	60
Do.....	do	80.00	85.00	(1)	60
Oilers.....	do	90.00	95.00	(1)	60
Deck hands.....	do	90.00	95.00	(1)	60
Do.....	do	80.00	85.00	(1)	60
Cooks.....	do	85.00	90.00	(1)	60
Vessels engaged in mud and sand towing—					
Captains.....	do	245.00	250.00	(1)	60
Engineers.....	do	235.00	240.00	(1)	60
Pilots or mates.....	do	206.00	211.00	(1)	60
Assistant engineers.....	do	206.00	211.00	(1)	60
Firemen.....	do	90.00	95.00	(1)	60
Oilers.....	do	90.00	95.00	(1)	60
Deck hands.....	do	80.00	85.00	(1)	60
Cooks.....	do	100.00	105.00	(1)	60

¹ Not reported.¹ Minimum.⁴ Increase.

TABLE 3.—RECENT CHANGES IN RATE PER 100-FOOT BOX FOR WINDOW-GLASS CUTTERS

Kind of window glass	Chicago, Ill.		Toledo, Ohio	
	Rate October, 1928	Rate October, 1929	Rate October, 1928	Rate October, 1929
Single strength.....	\$0. 48	\$0. 51	\$0. 46	\$0. 50
Double strength.....	. 52	. 54	. 50	. 55
Single strength, one fraction.....	1. 15	1. 15	1. 15	1. 15
Single strength, two fractions.....	1. 30	1. 30	1. 30	1. 30
Double strength, one fraction.....	1. 20	1. 20	1. 20	1. 20
Double strength, two fractions.....	1. 40	1. 40	1. 40	1. 40
29 to 32 ounces, inclusive.....	. 55	. 65	. 50	. 60
32 to 46 ounces or $\frac{3}{16}$ -inch, glazing quality.....	1. 15	1. 18	-----	1. 18
All silvering qualities.....	2. 20	2. 20	2. 20	2. 20
Stock sheets 84 united inches and over.....	. 78	. 78	. 78	. 78
Stock sheets under 84 united inches.....	1. 09	1. 00	1. 09	1. 00

¹ Extra per 50-foot box.

Double price for all sizes under 14 united inches.

Price and one-half for all selected qualities better than A quality in single and double strengths.

October, 1928.—Template cutters receive minimum of \$7 per day and 20 cents extra per 100-foot case for all cases cut over 32—100-foot cases per day. Cutters other than template cutters shall receive \$7.70 per day for a 9-hour day.

October, 1929.—Template cutters shall receive minimum of \$8 per day and 20 cents extra per 100-foot case for all cases cut over 36—100-foot cases per day. Cutters other than template cutters shall receive 90 cents per hour.

Wages of Civilian Employees of the United States Naval Establishment in 1930

UNDER date of November 27, 1929, the Secretary of the Navy issued a statement extending through 1930 the schedule of wages in effect during 1929 for all civilian employees in the United States Naval Establishment and the field service of the United States Marine Corps. The 1929 schedule was published in detail in the Labor Review for February, 1929 (pp. 104-107).

Extent of the Five-Day Week in Manufacturing Industries

THE results of a study of the 5-day week in manufacturing industries by the National Industrial Conference Board were recently published.¹ In this study the board undertook to assemble the data available to show, as nearly as possible, the present extent of the 5-day week in manufacturing industries; the reduction or redistribution of the weekly hours and the effect upon production; the reasons for its adoption; and the judgment of the executives of these companies as to its effectiveness as a regular work schedule.

The report shows 270 industrial establishments, employing in the aggregate 216,921 wage earners operating on a year-round 5-day week schedule, at the end of the year 1928.

The investigation discloses that the adoption of the 5-day week does not necessarily involve a reduction in the total number of hours of work per week, unless the weekly schedule on a $5\frac{1}{2}$ or a 6 day basis is above 50 hours. Of the 219 establishments reporting the weekly schedule of hours after making the change to the 5-day week, 27

¹ National Industrial Conference Board (Inc.). The Five-Day Week in Manufacturing Industries. New York, 1929.

companies report that the change was effected without a change in the total hours; 3 companies report a slight increase in working hours. Of the 189 companies making a reduction in the hours per week, 104 reduced their working schedule to 40 hours.

Data on the weekly output under the 5-day schedule as compared with the former 5½ and 6 day schedule were obtained from 127 establishments. Of 94 companies that had reduced the total hours per week, 6 companies reported a substantial loss in output and 24 companies a loss in proportion to the reduction in the hours; 46 companies reported no change in output and 18 companies reported an increase. Since the hours of this group were reduced in changing to the 5-day week it would seem that nearly 70 per cent of these companies suffered no loss in total output per week and are, therefore, obtaining greater output per hour than under the longer working schedule. Of the 32 companies reporting no change in working hours, 17 reported no change in output, 14 reported an increase, and only 1 reported a decrease. The one company reporting an increase in the total number of hours reports no change in the output.

The following quotations made from letters received by the conference board from companies operating on the 5-day week schedule give their reasons for the change to the 5-day week, as well as the advantages they find in its operation.

Efficient working pitch better maintained by concentration into fewer days, with proper rest intervals to relieve any strain of longer daily hours when nature of work makes this desirable. Reduced need for days off or lengthy vacation periods.

Greater relaxation over the week-end gives added pep to week's work.

The change to the 5-day week was made because of the desire to provide more leisure for our working force, and it might also be interesting to you to know that our production increased since the installation of the 5-day week without additional force; also that our rate of illness has decreased about 30 per cent and our rate of lateness has decreased about 80 per cent.

We have many married women who need more time for shopping and housework. Under the old system our attendance was bad on Saturday and we never received a half-day's work. Now our attendance is perfect and our labor turnover is less than 1 per cent per month.

Universal satisfaction. Our workers come to our village from many cities and towns by trolley or automobile. They appreciate the privilege of omitting one round trip and the double rest day. Office and shipping employees wish it were practicable for them also to enjoy the entire Saturday off.

They [employees] are strongly in favor of it; in fact, prefer to do overtime work at night rather than interfere with the Saturday holiday. It is our opinion that the person who "gets up and at it" reasonably early in the morning and sticks to it a little longer in the afternoon, with one full holiday on Saturday, has an advantage over the one who sleeps a little later, quits a little earlier, and thus gets his off time in useless dribblets.

Enthusiastic approval of over 80 per cent of workers by actual vote. Powerful stimulus to morale. Next to bonus, best continuous effect of anything company has ever done.

The report makes the following statement concerning the attitude of employers who consider the 5-day week schedule disadvantageous:

The attitude of employers operating a 5-day schedule but considering it disadvantageous seems to be strongly influenced by whether or not the 5-day week was introduced with their full approval or was forced upon them by organized labor. It is natural that they should resent a program they have been compelled to accept, and that they should magnify its shortcomings, just as on the other side there may be a tendency to minimize the disadvantages of a plan which has been voluntarily introduced. Some union-shop employers declared themselves satisfied that the 5-day schedule is desirable, but others made no attempt to

conceal their disapproval of a program of fewer hours of work and unreduced pay, which they view as little short of confiscation, and have been outspoken and caustic in their criticisms.

In concluding the report states:

This evidence does, however, remove the 5-day week from the status of a radical and impractical administrative experiment and places it among the plans which, however revolutionary they may appear to some, have demonstrated both practicability and usefulness under certain circumstances. An employer who is interested in the adaptability of the 5-day schedule to his own business may, therefore, approach the problem as a working schedule that has been in force for a number of years in various establishments with generally satisfactory results.

Following is a list of representative companies operating on a regular 5-day week basis, as given in the report.

COMPANIES OPERATING ON A 5-DAY WEEK BASIS

Company	Location	Product
Simon Ackerman Clothes Co.	Rochester, N. Y.	Clothing.
Addison Lithograph Co.	do.	Lithographing.
American Chiclé Co.	Long Island City, N. Y.	Chewing gum.
Amos Abbott Co.	Dexter, Me.	Woolens.
Beatty Page (Inc.)	New York City	Printing.
Bellman Brook Bleachery Co.	Fairview, N. J.	Dyeing and bleaching.
Bemis Car Truck Co.	Springfield, Mass.	Railroad supplies.
E. W. Bliss Co.	Brooklyn, N. Y.	Machinery.
Simon Bomzer Co.	New York City	Clothing.
Boston Bank Note Co.	Boston, Mass.	Lithographing.
Moto Meter Co. (Inc.)	Long Island City, N. Y.	Motometers.
C. C. Bradley & Son (Inc.)	Syracuse, N. Y.	Power hammers.
Breslin Bros. Carpet Co.	Gloucester, N. J.	Carpets.
Bristol Myers Co.	Hillside, N. J.	Chemicals.
Chicago Carton Co.	Chicago, Ill.	Paper boxes and cartons.
Consolidated Fruit Jar Co.	New Brunswick, N. J.	Stamped metalware.
Consolidated Lithographic Co.	Brooklyn, N. Y.	Lithographing.
Consolidated Paper Co.	Monroe, Mich.	Paper board.
Continental Mills	Philadelphia, Pa.	Textiles.
Cranshaw Carpet Co.	Newburgh, N. Y.	Carpets.
Curtis Publishing Co.	Philadelphia, Pa.	Printing and publishing.
Henry A. Dix Corporation	New York City	Uniform dresses.
Dorf & Co.	Baltimore, Md.	Hats and caps.
Doubleday Doran & Co. (Inc.)	Garden City, Long Island, N. Y.	Publishers.
Douglas Mack Co.	New York City	Clothing.
L. A. Dreyfus Co.	Rosebank, Staten Island, N. Y.	Gutta-percha.
E. R. Durkee & Co.	Elmhurst, Long Island, N. Y.	Salad dressing and spices.
Dutchess Hat Works	Beacon-on-Hudson, N. Y.	Hats.
Eberhard Faber Pencil Co.	Brooklyn, N. Y.	Lead pencils.
Eberhard Faber Pencil Co. (rubber division).	Newark, N. J.	Rubber sundries.
Einson-Freeman Co. (Inc.)	New York City	Lithographing.
J. Elsner & Sons Co. (Inc.)	Brooklyn, N. Y.	Clothing.
Electric Meter Corporation	New York City	Electric meters.
Empire Lithographing Co.	do.	Lithographing.
Empire Worsted Mills Co.	Jamestown, N. Y.	Textiles.
Ford Motor Car Co.	Detroit, Mich.	Automobiles.
Robert Gair Co.	New York City	Paper board and boxes.
Gardner & Harvey Co.	Middletown, Ohio.	Do.
Wm. P. Goldman and Bros. (Inc.)	New York City	Clothing.
A. Goldstein & Co.	do.	Boys' clothing.
Goodman and Levine	Rochester, N. Y.	Clothing.
Gordon and Friedman	New York City	Do.
Grinnell Lithographic Co.	do.	Lithographing.
Grossman Clothing Co.	do.	Clothing.
J. J. Grover's Sons Co.	Stoneham, Mass.	Shoes.
Frederick Gumbrecht Co.	Brooklyn, N. Y.	Lithographing.
Karl Gut Lithographing Co.	Bronx, N. Y.	Do.
Hardwood Counter Co.	Lynn, Mass.	Shoe counters.
Haroldite Finishing Co.	Taunton, Mass.	Dyeing and finishing.
R. R. Heywood Co.	New York City	Lithographing.
Hoag & Walden (Inc.)	Lynn, Mass.	Shoes.
Hoebscheid's Pants Co.	Mount Healthy, Ohio.	Clothing.
L. Hoffman Co.	New York City	Paper boxes.
Horowitz Bros. & Margaretan	do.	Matzo and noodles.
F. C. Huyek & Sons	Albany, N. Y.	Woolens.
Ilg Ventilating Co.	Chicago, Ill.	Heating and ventilating apparatus.

COMPANIES OPERATING ON A 5-DAY WEEK BASIS—Continued

Company	Location	Product
Jenkins Bros.	Bridgeport, Conn.	Valves.
Jenkins Bros. (rubber division)	Elizabeth, N. J.	Rubber goods.
Joseph & Feiss Co.	Cleveland, Ohio.	Clothing.
Kahn Tailoring Co.	Indianapolis, Ind.	Do.
Karl Lithograph Co.	Rochester, N. Y.	Lithographing.
Keller-Heimann Thompson Co.	do.	Clothing.
Kessner & Rabinowitz Co.	Union City, N. J.	Hats.
Kirkman & Sons.	Brooklyn, N. Y.	Soap.
Lamm Bros.	Boston, Mass.	Clothing.
Larus & Brother Co.	Richmond, Va.	Tobacco.
Latham Lithographing & Printing Co.	Long Island City, N. Y.	Lithography.
C. M. & D. B. Leavitt Co.	Haverhill, Mass.	Shoes.
Le Roy Latham Printing Co.	Woodside, Long Island, N. Y.	Printing and lithographing.
Lipps Bros.	New York City.	Clothing.
J. Lipson & Co.	do.	Do.
Malden Knitting Mills.	Malden, Mass.	Woolens.
Maryland Color Printing Co.	Baltimore, Md.	Printing.
Metal Hose & Tubing Co. (Inc.)	Brooklyn, N. Y.	Metal tubing and hose.
Michaels Stern & Co.	Rochester, N. Y.	Clothing.
Monarch Manufacturing Co.	Milwaukee, Wis.	Work suits.
Leopold Morse Co. (Inc.)	Boston, Mass.	Clothing.
National Meter Co.	Brooklyn, N. Y.	Water and oil meters.
N. E. Iron Works Co.	Boston, Mass.	Boilers.
Parker Metal Decorating Co.	Baltimore, Md.	Metal goods.
Paul Revere Manufacturing Co.	do.	Wash suits.
Pierce Lithographic Corporation	Brooklyn, N. Y.	Lithographing.
Pioneer Instrument Co. (Inc.)	do.	Aircraft instruments.
Portland Rubber Co.	Portland, Oreg.	Rubber products.
Queens Products Co.	Brooklyn, N. Y.	Hand bags.
Renton Heel Co.	Lynn, Mass.	Heels.
Rhoades & Ripley Clothing Co.	Boston, Mass.	Clothing.
Rochester Folding Box Co.	Rochester, N. Y.	Boxes and lithographing.
Rochester Manufacturing Co.	do.	Machinery.
Rode & Brand Co.	New York City.	Lithographing.
M. H. Rosenberg & Co.	do.	Underwear.
M. H. Rosenmond & Co.	do.	Clothing.
Sackett & Wilhelms Corporation	Brooklyn, N. Y.	Lithographing.
Sale Lithograph Co.	Buffalo, N. Y.	Do.
Schmidt & Ault Paper Co.	York, Pa.	Paper board.
Seabright Woven Felt Co.	Camden, Me.	Felts.
Seiter & Kappes Lithograph Co.	New York City.	Lithographing.
Shirek & Hirsch Co.	do.	Clothing.
Snyder & Black Co.	do.	Lithographing.
A. G. Spaulding & Bros.	Chicopee, Mass.	Sporting goods.
Stecher Lithographing Co.	Rochester, N. Y.	Lithographing.
J. Stevens Arms Co.	Chicopee Falls, Mass.	Guns and rifles.
Strauss & Buegeleisen Co.	Brooklyn, N. Y.	Goggles.
Sweet Orr & Co. (Inc.)	New York City.	Clothing.
Trautman Bailey & Blampay Co.	do.	Lithographing.
Trimont Manufacturing Co. (Inc.)	Roxbury, Mass.	Tools.
Tucker Lithograph Co. (Inc.)	Long Island City, N. Y.	Lithographing.
Unit Laundry Co.	Newark, N. J.	Laundry.
U. S. Printing and Lithograph Co.	Brooklyn, N. Y.	Printing.
David Wall Sons Litho Co.	do.	Lithographing.
Whitehouse Leather Products Co. (Inc.)	New York City.	Bags and leather products.
J. Wise & Co. (Inc.)	do.	Dresses.
J. R. Wood & Sons	Brooklyn, N. Y.	Jewelry.
Wright Aeronautical Corporation	Paterson, N. J.	Aero engines.
Wm. Wrigley, Jr.	Chicago, Ill.	Chewing gum.
Zabel Bros. Co.	Philadelphia, Pa.	Printers and lithographers.

Estimates of National and Per Capita Income in 1928

IN CONTINUATION of its earlier work along the same lines, the National Bureau of Economic Research (Inc.) has recently published its estimates of national and per capita incomes in the United States for the year 1928.¹

¹National Bureau of Economic Research (Inc.). News-Bulletin, New York, Dec. 16, 1929.

dwelling places were provided for 6,137 families according to December permits and 8,849 according to November permits.

The States of New Jersey, New York, Massachusetts, Illinois, and Pennsylvania, through their departments of labor, are cooperating with the Bureau of Labor Statistics in collecting this information.

Table 2 shows the estimated cost of new residential buildings, new nonresidential buildings, total buildings operations (including alterations and repairs), and the number of families provided for in new dwellings in each of the 273 cities from which reports were received for both November and December.

Totals and percentages of increase or decrease in expenditures for each class of building and in the number of families provided for are shown by geographic divisions.

Reports were received for both November and December from 44 cities in New England, 62 cities in the Middle Atlantic States, 70 cities in the East North Central States, 22 cities in the West North Central States, 30 cities in the South Atlantic States, 19 cities in the South Central States, and 26 cities in the Mountain and Pacific States.

New England States

IN THE New England States according to building permits issued there was an increase in indicated expenditures for all building operations in December as compared with November of 26.2 per cent. In residential buildings there was a decrease of 43.1 per cent. In nonresidential buildings there was an increase of 177.5 per cent. The number of families provided with dwelling places in the new buildings for which permits were issued decreased 41 per cent, comparing December with November.

Large increases for total building operations were shown in New Haven, Boston, Pittsfield, and Providence. Decreases were registered in Bridgeport, Lynn, Springfield, and Cranston.

No reports were received from Hartford and New Britain, Conn.; Brookline and Worcester, Mass.; and Newport, R. I.

Middle Atlantic States

IN THE Middle Atlantic division there was a decrease of 35.3 per cent in the estimated cost of all building operations, comparing December permits with November permits. Residential buildings decreased 32.7 per cent and nonresidential buildings 35.4 per cent. The decrease in families provided for in new buildings was 26.2 per cent.

The large decrease in projected building in this division was largely accounted for by the slump in permits issued in New York City. In the Borough of Manhattan the estimated cost of the erection of buildings for which permits were issued in November was over \$28,000,000 and in December only \$12,000,000. There was a large slump also in the Borough of the Bronx and Borough of Brooklyn. Newark, also in the Metropolitan district, showed a marked decrease in indicated expenditures for building operations. There was also a decrease in Philadelphia, but a substantial increase in Pittsburgh.

No reports were received from Amsterdam, N. Y., Chester, Harrisburg, Lebanon, and Reading, Pa.

East North Central States

COMPARING permits issued in December with those issued in November in the East North Central division, decreases were shown all along the line. The decrease in residential building was 40.6 per cent. The decrease in the number of families provided for in new house-keeping dwellings was 27.2 per cent. Indicated expenditures for new nonresidential buildings decreased 26.7 per cent, comparing December with November. Permits issued during December for all building operations in this division decreased 32.5 per cent in estimated costs, compared with those issued during November.

Over 80 per cent of the thirteen-million-dollar decrease in this division was accounted for by falling-off in indicated operations in the city of Chicago. Comparing December with November permits in that city, there was a decrease of \$11,000,000.

Notable increases in building operations in this division were shown in Fort Wayne, Hammond, and Milwaukee. In the latter city there was an increase of over \$4,000,000 in nonresidential building.

Decreases were shown in Chicago, Detroit, Akron, and Flint.

No reports were received from Canton and Youngstown, Ohio, Anderson, Ind., Battle Creek, Mich., Madison and Racine, Wis.

West North Central States

IN THE West North Central division there was a decrease in indicated expenditures for new residential buildings of 49.4 per cent, comparing permits issued in December with those issued in November. The permits issued for new nonresidential buildings during December, however, showed an increase of 2.9 per cent in estimated costs, compared with those issued in November.

The number of families planned for in new buildings decreased 52.5 per cent according to permits issued in December, compared with those issued in November.

Decreases in indicated expenditures were shown in St. Louis, St. Paul, and Minneapolis in comparing December with November. Substantial increases were noted in Topeka and Sioux Falls and a slight increase in Omaha.

No reports were received from Hutchinson, Kans., and Kansas City, Mo.

South Atlantic States

BUILDING permits issued in the South Atlantic division show an increase for all building operations and for residential and nonresidential buildings. The increase in indicated expenditures for residential buildings was 23 per cent, for nonresidential buildings 22 per cent; and for all building operations 4.8 per cent. The lower percentage of increase for total building operations was caused by a large decrease in the cost of repairs in the city of Baltimore for the month of December as compared with those in November.

The number of families provided for in the new buildings for which permits were issued in December decreased 48.9 per cent, compared with those provided for by the permits issued in November.

Large increases were shown in Washington, Richmond, and Durham. Decreases were shown for Norfolk, Savannah, Huntington, and Wheeling.

No reports were received from Pensacola and Tampa, Fla., Augusta, Ga., Wilmington, N. C., Spartanburg, S. C., and Charleston, W. Va.

South Central States

THE South Central division showed a decrease in indicated expenditures for residential building of 23.6 per cent, but an increase in indicated expenditures for new nonresidential building of 118.2 per cent. Comparing December with November permits there was an increase of 71.3 per cent in total expenditures for all building operations. There was a decrease of 30.5 per cent in the number of families provided for in new buildings.

The increase in nonresidential buildings was largely accounted for by large office and store buildings in San Antonio. A permit was issued in that city during December for an office building costing \$1,750,000.

Substantial gains in building operations were also shown in New Orleans, Oklahoma City, Memphis, and Austin. Decreases were indicated in Montgomery, Shreveport, and Fort Worth.

No reports were received from Birmingham, Ala., Fort Smith, Ark., Covington, Louisville, and Newport, Ky., Baton Rouge, La., Tulsa, Okla., Chattanooga, Tenn., El Paso, Galveston, Houston, Laredo, and Port Arthur, Tex.

Mountain and Pacific States

IN THE Mountain and Pacific division there was a decrease in the estimated cost of total building operations, of the estimated cost of residential buildings, and in the estimated cost of nonresidential buildings. The number of families provided for also showed a decrease, comparing December with November permits.

The decrease in the estimated cost of residential buildings was 28.3 per cent, in the estimated cost of nonresidential buildings 4.9 per cent, and in the estimated cost of total building operations 13.5 per cent.

The number of families provided for decreasing 23.8 per cent.

Increases were shown in total building operations in Phoenix, Denver, Salt Lake City, and Seattle, while decreases were shown in San Francisco, Pueblo, Ogden, and Tacoma.

No reports were received from Los Angeles and Oakland, Calif.

TABLE 2.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, NOVEMBER AND DECEMBER, 1929

New England States

City and State	New residential buildings				New nonresidential buildings		Total construction (including alterations and repairs)	
	Estimated cost		Families provided for in new dwellings		Estimated cost		Estimated cost	
	November, 1929	December, 1929	November, 1929	December, 1929	November, 1929	December, 1929	November, 1929	December, 1929
Connecticut:								
Bridgeport.....	\$116,600	\$164,500	26	18	\$225,155	\$85,580	\$413,500	\$261,695
Greenwich.....	345,500	280,800	19	8	89,380	21,205	483,385	344,705
Meriden.....	43,250	19,750	8	5	11,185	72,385	107,290	95,635
New Haven.....	940,000	55,000	7	9	367,250	1,902,085	1,345,675	1,981,385
New London.....	50,500	69,000	5	10	14,200	4,600	82,775	83,700
Norwalk.....	96,500	35,500	14	5	31,500	237,300	144,525	282,450
Stamford.....	89,700	55,000	12	3	228,445	14,850	342,720	98,425
Waterbury.....	61,000	20,500	12	5	91,900	20,100	173,900	41,600
Maine:								
Bangor.....	10,500	0	2	0	2,150	75	18,500	75
Lewiston.....	6,000	13,000	1	4	3,500	20,000	9,500	33,000
Portland.....	50,700	34,600	11	7	7,775	9,275	149,335	59,800
Massachusetts:								
Boston ¹	382,300	445,500	86	55	209,680	1,630,980	952,358	2,776,216
Brockton.....	35,800	14,200	6	3	6,755	2,550	58,370	33,365
Cambridge.....	47,000	37,500	2	7	41,590	51,885	133,545	116,800
Chelsea.....	0	0	0	0	11,500	600	14,020	5,725
Chicopee.....	6,500	0	2	0	57,100	1,450	67,750	1,450
Everett.....	11,000	19,000	3	5	13,300	1,100	34,000	28,100
Fall River.....	0	14,300	0	3	12,050	23,110	18,815	53,129
Fitchburg.....	6,500	14,000	1	3	3,750	8,380	10,775	26,480
Haverhill.....	6,500	3,000	2	1	6,795	475	25,095	7,825
Holyoke.....	0	500	0	1	1,100	250	26,970	9,650
Lawrence.....	8,000	0	2	0	2,750	4,450	21,700	17,550
Lowell.....	4,400	11,300	1	3	8,615	12,755	22,180	28,780
Lynn.....	65,900	14,300	13	3	8,960	4,720	103,370	28,313
Malden.....	78,000	80,000	24	24	75,555	300	160,655	88,416
Medford.....	108,600	80,500	18	14	22,525	11,900	149,255	98,100
New Bedford.....	0	0	0	0	108,775	17,800	122,825	28,000
Newton.....	300,500	235,000	29	22	60,340	8,810	408,863	252,595
Pittsfield.....	119,500	59,600	23	11	15,375	1,110,400	185,550	1,181,100
Quincy.....	182,900	112,100	48	33	26,140	258,055	219,353	382,588
Revere.....	17,500	7,000	4	2	1,600	1,725	30,700	18,825
Salem.....	72,500	15,500	18	3	15,040	9,250	133,295	33,645
Somerville.....	22,000	6,500	5	2	15,735	122,530	81,965	137,650
Springfield.....	151,400	58,450	32	15	304,450	26,775	509,495	100,435
Taunton.....	7,000	5,500	2	2	15,055	2,550	31,740	9,600
Waltham.....	29,000	41,000	5	12	22,510	4,650	60,960	48,400
Watertown.....	82,500	13,000	18	3	16,550	8,350	138,100	28,550
New Hampshire:								
Manchester.....	23,250	26,500	6	5	9,485	4,350	43,786	115,140
Rhode Island:								
Central Falls.....	43,200	13,000	15	4	4,575	0	48,025	13,050
Cranston.....	150,400	115,100	35	21	14,965	10,365	173,565	126,115
East Providence.....	54,800	44,000	11	7	157,400	114,400	223,907	164,010
Pawtucket.....	117,600	56,800	28	13	62,130	7,820	184,255	94,420
Providence.....	457,400	217,300	96	38	145,950	1,268,600	958,200	1,580,306
Woonsocket.....	7,500	0	1	0	16,925	6,025	38,125	11,725
Total.....	4,409,700	2,508,100	659	389	2,567,465	7,124,835	8,662,682	10,928,577
Per cent of change.....		-43.1		-41.0		+177.5		+26.2

Middle Atlantic States

New Jersey:								
Atlantic City.....	\$40,000	\$8,000	0	1	\$36,700	\$250	\$258,994	\$109,540
Bayonne.....	12,500	0	3	0	9,650	55,000	31,450	72,000
Bloomfield.....	94,000	345,000	19	74	18,000	24,000	114,000	370,000
Camden.....	77,700	108,000	36	27	72,455	107,075	248,118	233,913
Clifton.....	130,200	95,000	24	20	19,650	22,550	153,800	121,610
East Orange.....	28,500	867,000	5	131	153,245	58,400	202,525	948,235
Elizabeth.....	81,000	51,000	14	7	252,000	61,000	333,000	112,000
Hoboken.....	0	0	0	0	0	8,500	53,065	23,315

¹ Applications filed.

TABLE 2.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, NOVEMBER AND DECEMBER, 1929—Continued

Middle Atlantic States—Continued

City and State	New residential buildings				New nonresidential buildings		Total construction (including alterations and repairs)	
	Estimated cost		Families provided for in new dwellings		Estimated cost		Estimated cost	
	November, 1929	December, 1929	November, 1929	December, 1929	November, 1929	December, 1929	November, 1929	December, 1929
New Jersey—Contd.								
Irvington	\$28,000	\$52,500	6	11	\$12,840	\$612,193	\$51,190	\$667,603
Jersey City	25,000	34,000	3	8	193,815	57,745	244,915	141,213
Kearny	87,000	0	22	0	37,950	1,645	128,485	3,145
Montclair	43,000	28,500	4	2	12,343	2,600	90,603	39,150
Newark	107,120	209,500	13	43	2,191,735	430,115	2,978,184	730,339
New Brunswick	260,000	207,000	6	66	9,800	32,700	280,975	241,750
Orange	225,000	0	54	0	4,850	10,000	256,858	43,940
Passaic	343,500	5,500	3	2	37,700	44,000	407,989	77,493
Paterson	66,550	116,500	18	32	44,182	73,890	169,637	229,513
Perth Amboy	12,500	7,800	2	2	94,123	19,450	134,048	32,225
Plainfield	36,186	9,000	6	1	5,600	1,300	65,246	33,733
Trenton	14,500	4,000	3	1	65,728	3,015	121,786	28,950
Union City	6,500	0	2	0	0	0	25,100	3,770
West New York	9,550	0	2	0	10,900	900	59,965	3,010
New York:								
Albany	118,000	129,500	14	11	12,607	4,050	235,859	190,390
Auburn	23,700	13,300	6	2	183,560	81,993	214,240	104,538
Binghamton	27,700	19,000	8	6	41,598	38,400	104,882	98,105
Buffalo	448,000	341,500	129	97	766,710	823,341	1,357,805	1,201,516
Elmira	31,100	4,800	5	1	4,555	262,945	43,972	296,430
Jamestown	35,000	12,600	8	4	104,700	5,550	149,155	32,195
Kingston	9,200	18,000	4	4	5,850	4,650	28,080	198,710
Mount Vernon	35,000	106,000	1	8	39,200	157,570	92,250	310,670
Newburgh	6,000	11,500	1	2	62,850	72,350	81,050	86,850
New Rochelle	156,400	245,000	11	11	64,393	165,089	250,748	418,089
New York City:								
Bronx ¹	924,500	939,600	200	184	5,656,770	2,423,262	6,901,080	3,597,062
Brooklyn ¹	977,100	1,940,000	197	367	7,056,745	1,011,415	8,862,685	3,744,520
Manhattan ¹	9,125,000	2,425,000	765	191	11,323,965	7,826,300	28,293,825	12,024,783
Queens ¹	2,409,050	2,218,775	601	442	1,688,949	1,050,856	4,416,004	3,699,384
Richmond ¹	196,300	218,425	38	31	107,030	157,640	363,114	413,717
Niagara Falls	47,800	0	12	0	163,606	145,300	256,629	167,028
Poughkeepsie	11,500	24,000	2	2	59,150	41,500	72,900	123,000
Rochester	399,200	90,800	18	19	182,250	286,325	498,805	423,605
Schenectady	72,500	61,000	15	10	62,800	80,100	171,525	265,200
Syracuse	334,300	242,000	67	28	109,645	776,850	777,835	1,133,800
Troy	38,500	29,000	7	4	60,050	59,200	135,749	101,950
Utica	80,000	63,000	12	10	88,300	157,850	272,100	254,050
Watertown	3,500	0	1	0	75,745	425,900	105,757	427,153
White Plains	104,000	67,500	11	6	188,200	165,100	325,375	235,900
Yonkers	628,500	771,000	80	16	509,888	549,010	1,371,063	1,341,535
Pennsylvania:								
Allentown	95,500	13,000	17	2	117,900	8,650	234,699	34,800
Altoona	47,400	0	10	0	14,973	2,795	74,847	12,451
Bethlehem	3,500	7,000	1	2	11,410	500	17,205	22,175
Butler	5,000	0	1	0	2,750	400	10,950	1,150
Easton	8,600	0	1	0	6,800	403,650	21,077	412,850
Erie	145,750	94,950	58	28	40,150	215,775	207,035	375,425
Hazleton	0	0	0	0	2,687	0	9,463	0
Johnstown	15,300	0	2	0	36,510	2,300	82,935	4,750
Lancaster	30,000	0	6	0	3,575	381,450	67,825	385,300
McKeesport	77,800	23,800	10	5	6,195	1,648	94,750	32,766
New Castle	24,300	12,400	5	2	4,855	1,605	32,595	18,480
Norristown	61,000	0	11	0	25,819	2,485	142,651	3,445
Philadelphia	578,300	284,000	122	24	6,669,250	4,004,210	7,967,315	5,740,405
Pittsburgh	569,000	653,500	103	130	1,908,657	3,038,730	2,755,452	5,631,826
Scranton	21,550	13,950	5	4	140,425	3,600	176,225	48,700
Wilkes-Barre	14,800	14,000	2	3	84,375	10,230	107,046	25,298
Wilkesburg	36,000	35,000	6	11	3,150	4,185	73,160	108,772
Williamsport	80,675	11,000	19	3	15,427	2,178	137,256	15,943
York	12,500	7,000	3	2	21,100	7,000	45,798	22,037
Total	19,797,131	13,323,200	2,848	2,103	41,030,590	26,490,265	74,259,704	48,053,200
Per cent of change		-32.7		-26.2		-35.4		-35.3

¹ Applications filed.

TABLE 2.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, NOVEMBER AND DECEMBER, 1929—Continued

East North Central States

City and State	New residential buildings				New nonresidential buildings		Total construction (including alterations and repairs)	
	Estimated cost		Families provided for in new dwellings		Estimated cost		Estimated cost	
	November, 1929	December, 1929	November, 1929	December, 1929	November, 1929	December, 1929	November, 1929	December, 1929
Illinois:								
Alton.....	\$10,000	\$13,675	4	4	\$175	\$10,300	\$17,575	\$27,075
Aurora.....	30,935	9,400	8	2	210,754	1,586	254,050	18,939
Belleville.....	50,000	14,500	11	4	87,375	2,385	137,375	17,785
Bloomington.....	82,000	63,000	9	11	5,300	0	87,300	64,000
Chicago.....	4,184,800	3,169,300	555	731	12,291,250	1,987,900	16,760,680	5,509,825
Cicero.....	154,200	62,000	21	9	7,710	104,695	167,075	191,695
Danville.....	12,600	15,000	3	5	64,000	0	84,100	18,500
Decatur.....	25,800	0	5	0	513,610	560	559,210	3,700
East St. Louis.....	64,700	27,200	19	9	17,475	370,050	85,061	401,185
Elgin.....	16,450	20,700	3	4	25,950	26,650	58,320	61,539
Evanston.....	91,000	110,000	8	2	39,000	251,500	167,500	400,500
Joliet.....	19,000	34,000	3	4	464,000	60,000	508,700	130,900
Moline.....	51,500	187,000	9	30	576,945	5,950	644,239	198,791
Oak Park.....	74,500	168,500	5	3	8,550	38,000	92,775	213,400
Peoria.....	368,960	52,300	32	7	20,060	125,550	415,275	237,400
Quincy.....	25,800	0	4	0	46,300	2,500	88,725	2,500
Rockford.....	142,500	83,500	42	19	45,500	25,800	235,910	132,200
Rock Island.....	94,300	24,500	39	7	120,029	550	326,418	63,613
Springfield.....	58,800	12,500	15	3	146,485	9,635	221,176	27,412
Indiana:								
East Chicago.....	47,675	12,500	6	3	22,550	662,407	107,475	674,907
Elkhart.....	15,100	12,300	4	3	3,515	1,900	34,121	29,789
Evansville.....	28,400	23,700	11	7	221,360	15,300	265,885	45,650
Fort Wayne.....	173,020	79,900	35	17	466,488	1,195,938	675,388	1,322,913
Gary.....	83,500	24,000	14	7	56,425	5,850	159,600	33,750
Hammond.....	72,000	46,500	15	16	185,300	1,008,900	299,300	1,058,100
Indianapolis.....	242,300	150,995	66	42	140,664	339,875	501,544	540,883
Kokomo.....	0	0,050	0	2	144,215	5,010	147,520	17,005
Marion.....	28,000	0	4	0	82,000	6,150	117,000	6,375
Muncie.....	11,621	33,295	4	10	20,340	8,682	51,962	169,264
Richmond.....	18,500	30,000	5	8	21,546	30,325	46,690	77,505
South Bend.....	(¹)	61,250	(²)	15	(³)	83,025	(⁴)	147,850
Terre Haute.....	18,500	3,400	3	2	2,060	900	22,876	15,270
Michigan:								
Bay City.....	14,000	5,500	5	2	32,500	800	64,736	13,150
Detroit.....	1,973,188	1,032,133	445	235	1,639,836	1,040,327	4,880,017	2,398,630
Flint.....	238,126	119,580	63	30	226,309	22,156	511,570	238,676
Grand Rapids.....	123,100	61,800	26	18	82,070	31,760	254,705	116,625
Hamtramck.....	27,000	5,500	6	2	16,675	3,200	43,675	14,000
Highland Park.....	0	165,000	0	42	49,090	10,300	64,145	179,800
Jackson.....	80,500	18,900	20	3	103,762	11,065	189,102	131,530
Kalamazoo.....	23,700	34,000	7	6	94,115	22,970	137,506	69,361
Lansing.....	97,900	40,768	21	11	921,118	144,270	1,033,848	202,703
Muskegon.....	42,950	19,900	13	5	141,770	632,850	196,005	656,842
Pontiac.....	51,700	38,650	20	14	63,931	424,930	124,786	467,030
Port Huron.....	3,000	0	1	0	132,000	0	135,550	1,100
Saginaw.....	92,480	26,700	8	9	157,811	167,635	277,329	214,950
Ohio:								
Akron.....	227,400	108,300	39	24	2,909,569	2,355,466	3,155,864	2,492,814
Ashtabula.....	13,000	0	2	0	2,285	28,360	19,185	32,282
Cincinnati.....	617,600	247,850	83	34	310,510	1,167,260	1,105,430	1,464,480
Cleveland.....	575,000	311,000	119	56	975,800	113,850	1,805,300	931,600
Columbus.....	237,900	87,800	37	15	282,150	95,700	562,700	211,800
Dayton.....	56,100	34,000	17	11	95,917	202,334	210,517	262,938
East Cleveland.....	192,000	0	15	0	15,300	100	216,335	1,300
Hamilton.....	50,550	44,000	15	5	3,475	850	57,300	72,325
Lakewood.....	61,600	24,500	7	6	437,770	9,540	505,805	37,340
Lima.....	0	7,000	0	1	2,055	4,500	9,250	31,200
Lorain.....	16,050	17,400	5	6	3,564	1,805	25,364	19,205
Mansfield.....	94,900	0	12	0	0	25,950	103,650	52,900
Marion.....	3,000	0	1	0	22,055	5,838	25,255	5,838
Newark.....	14,000	20,100	5	6	11,510	1,170	28,485	22,170
Portsmouth.....	7,500	5,500	2	2	9,125	2,200	17,325	9,325

¹ Not reported.

TABLE 2.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, NOVEMBER AND DECEMBER, 1929—Continued

East North Central States—Continued

City and State	New residential buildings				New nonresidential buildings		Total construction (including alterations and repairs)	
	Estimated cost		Families provided for in new dwellings		Estimated cost		Estimated cost	
	November, 1929	December, 1929	November, 1929	December, 1929	November, 1929	December, 1929	November, 1929	December, 1929
Ohio—Continued.								
Springfield.....	\$12,400	\$10,000	7	4	\$12,625	\$350	\$36,830	\$20,400
Steubenville.....	40,700	5,500	11	1	2,550	0	44,900	8,650
Toledo.....	92,950	47,200	25	15	377,190	70,510	520,120	207,493
Warren.....	39,400	31,500	13	10	56,725	9,450	98,415	42,925
Wisconsin:								
Fond du Lac.....	27,000	0	3	0	5,120	0	33,270	730
Green Bay.....	48,100	0	18	0	27,000	360	90,080	23,400
Kenosha.....	118,985	63,500	22	3	110,162	8,845	268,713	80,670
Milwaukee.....	623,000	352,600	159	93	1,819,735	6,877,243	2,918,297	7,331,160
Oshkosh.....	28,200	2,000	9	1	9,185	650	41,819	4,250
Sheboygan.....	58,000	0	11	0	4,360	1,214	69,970	9,169
Superior.....	122,800	16,000	27	4	2,080	8,850	287,670	25,550
Total.....	12,615,260	7,494,496	2,261	1,645	27,701,995	20,309,506	44,187,096	29,818,741
Per cent of change.....		-40.6		-27.2		-26.7		-32.5

West North Central States

OWA:								
Burlington.....	\$2,400	\$15,000	1	5	\$15,650	\$1,725	\$18,150	\$17,605
Cedar Rapids.....	28,800	12,300	7	3	20,665	8,994	72,323	26,664
Council Bluffs.....	10,000	0	3	0	5,500	13,000	24,800	14,000
Davenport.....	49,400	53,000	12	11	29,160	111,950	89,875	175,683
Des Moines.....	51,000	33,850	12	7	131,582	14,560	253,947	82,610
Dubuque.....	3,000	2,950	1	1	1,255	1,750	15,431	9,753
Ottumwa.....	0	3,500	0	1	0	37,215	5,000	40,715
Sioux City.....	41,700	30,500	14	7	147,895	16,325	190,895	47,975
Waterloo.....	26,000	13,600	8	6	7,075	4,325	44,225	17,925
Kansas:								
Kansas City.....	43,100	32,950	16	16	117,865	2,650	167,465	41,425
Topeka.....	21,700	3,100	6	2	23,114	89,090	49,989	104,825
Wichita.....	172,350	162,500	64	43	50,543	73,855	253,999	250,633
Minnesota:								
Duluth.....	28,000	18,500	7	4	6,795	950	96,382	47,850
Minneapolis.....	481,235	187,925	116	52	320,760	27,510	1,298,215	349,640
St. Paul.....	233,640	99,840	41	15	484,458	210,060	787,205	372,069
Missouri:								
Joplin.....	12,000	5,400	6	3	3,000	54,100	17,000	62,200
Springfield.....	72,100	30,600	21	14	27,335	11,350	112,110	126,900
St. Joseph.....	13,900	3,800	7	2	8,520	0	30,607	8,862
St. Louis.....	420,500	151,700	119	33	457,483	836,795	1,432,749	1,351,053
Nebraska:								
Lincoln.....	42,200	18,000	17	5	59,420	27,520	109,570	45,520
Omaha.....	84,850	64,600	40	20	27,915	405,900	341,115	482,750
South Dakota:								
Sioux Falls.....	34,000	3,500	10	1	54,950	108,500	91,450	152,750
Total.....	1,871,875	947,115	528	251	2,000,940	2,058,124	5,502,502	3,829,407
Per cent of change.....		-49.4		-52.5		+2.9		-30.4

South Atlantic States

Delaware:								
Wilmington.....	\$101,500	\$60,500	23	11	\$40,825	\$12,050	\$192,004	\$165,885
District of Columbia:								
Washington.....	623,300	1,494,400	61	26	260,395	685,900	1,245,189	2,706,973
Florida:								
Jacksonville.....	79,900	46,025	37	14	42,745	51,128	165,850	139,273
Miami.....	35,000	60,650	8	11	255,000	111,145	378,617	247,162
St. Petersburg.....	23,400	14,300	4	3	12,300	27,000	56,100	54,700

TABLE 2.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, NOVEMBER AND DECEMBER, 1929—Continued

South Atlantic States—Continued

City and State	New residential buildings				New nonresidential buildings		Total construction (including alterations and repairs)	
	Estimated cost		Families provided for in new dwellings		Estimated cost		Estimated cost	
	November, 1929	December, 1929	November, 1929	December, 1929	November, 1929	December, 1929	November, 1929	December, 1929
Georgia:								
Atlanta.....	\$88,273	\$86,350	37	49	\$119,375	\$116,686	\$258,548	\$261,316
Columbus.....	43,625	2,600	42	6	34,285	330	81,850	20,195
Macon.....	1,705	10,000	4	2	14,900	13,000	67,786	50,440
Savannah.....	34,900	23,500	10	5	5,000	3,350	41,492	27,995
Maryland:								
Baltimore.....	939,000	766,000	200	66	572,900	1,490,200	2,694,000	2,734,460
Cumberland.....	10,300	8,000	3	1	3,518	2,637	15,693	12,137
Hagerstown.....	24,400	74,000	5	5	2,510	6,750	27,060	82,250
North Carolina:								
Asheville.....	17,150	91,400	2	1	8,830	1,245	37,490	100,790
Charlotte.....	130,108	77,450	36	19	16,560	2,375	208,173	93,992
Durham.....	28,500	44,150	10	22	33,462	219,500	65,212	266,200
Greensboro.....	60,019	4,000	11	1	587,217	965	656,791	15,987
Winston-Salem.....	25,000	14,200	9	6	10,645	6,765	50,695	43,504
South Carolina:								
Charleston.....	8,000	2,400	5	2	6,850	0	49,920	6,900
Columbia.....	51,100	10,500	15	5	3,600	107,825	70,960	121,525
Greenville.....	69,650	0	14	0	63,400	31,080	137,960	57,685
Virginia:								
Lynchburg.....	32,130	2,600	6	3	2,125	160,540	37,915	172,509
Newport News.....	9,800	6,500	3	2	2,174	2,048	21,485	34,152
Norfolk.....	16,200	35,900	5	8	169,355	34,175	196,600	82,455
Petersburg.....	18,300	1,250	6	1	6,250	50	29,745	1,450
Portsmouth.....	2,000	3,650	2	2	750	200	9,915	16,633
Richmond.....	66,900	200,790	12	22	127,243	112,995	287,069	415,229
Roanoke.....	21,607	48,990	6	5	46,860	15,060	75,140	65,580
West Virginia:								
Clarksburg.....	4,400	2,500	3	1	15,340	290	22,675	15,540
Huntington.....	9,000	0	3	0	156,330	3,000	165,330	5,560
Wheeling.....	27,300	8,500	7	2	18,650	1,500	353,488	54,951
Total.....	2,602,467	3,201,105	589	301	2,639,394	3,219,899	7,700,752	8,073,309
Per cent of change.....		+23.0		-48.9		+22.0		+4.8

South Central States

Alabama:								
Mobile.....	\$19,800	\$35,450	5	10	\$9,900	\$21,000	\$54,800	\$71,518
Montgomery.....	47,900	12,500	39	12	31,700	9,845	123,090	44,436
Arkansas:								
Little Rock.....	(¹)	99,580	(¹)	29	(¹)	325,235	(¹)	456,799
Kentucky:								
Lexington.....	46,450	5,500	4	4	6,250	46,765	70,685	83,425
Paducah.....	11,300	1,250	5	1	5,450	0	16,750	1,250
Louisiana:								
New Orleans.....	78,900	61,675	21	15	121,616	519,701	277,492	620,740
Shreveport.....	33,086	29,140	28	16	77,391	16,849	182,155	73,103
Oklahoma:								
Muskogee.....	3,300	0	2	0	690	9,250	6,090	9,635
Oklahoma City.....	527,500	436,500	165	127	632,175	329,435	1,224,325	1,817,160
Okmulgee.....	0	0	0	0	125	0	375	
Tennessee:								
Knoxville.....	101,625	25,690	24	5	86,880	56,700	207,486	89,180
Memphis.....	230,100	179,660	69	58	39,390	163,116	343,491	583,658
Nashville.....	42,900	41,150	19	21	30,900	26,200	104,472	122,772
Texas:								
Austin.....	36,125	47,675	28	23	38,788	924,960	85,788	979,534
Beaumont.....	40,080	34,445	18	16	122,665	31,355	186,701	79,518
Dallas.....	112,440	100,150	32	36	313,240	229,410	526,042	513,419
Fort Worth.....	135,100	207,600	48	33	736,515	63,768	914,835	326,218
San Antonio.....	394,245	193,985	203	112	77,620	2,758,865	565,150	3,110,285

¹ Not reported.

TABLE 2.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, NOVEMBER AND DECEMBER, 1929—Continued

South Central States—Continued

City and State	New residential buildings				New nonresidential buildings		Total construction (including alterations and repairs)	
	Estimated cost		Families provided for in new dwellings		Estimated cost		Estimated cost	
	November, 1929	December, 1929	November, 1929	December, 1929	November, 1929	December, 1929	November, 1929	December, 1929
Texas—Continued.								
Waco.....	\$48,533	\$47,707	7	11	\$38,037	\$28,200	\$93,004	\$84,247
Wichita Falls.....	1,350	200	4	1	29,930	0	48,652	8,105
Total.....	1,910,734	1,460,267	721	501	2,399,262	5,235,419	5,031,384	8,618,203
Per cent of change.....		-23.6		-30.5		+118.2		+71.3

Mountain and Pacific States

Arizona:								
Phoenix.....	\$123,415	\$76,880	49	37	\$24,715	\$287,650	\$155,730	\$484,200
Tucson.....	32,600	35,550	17	13	41,590	200,275	80,150	242,560
California:								
Alameda.....	33,900	12,000	8	3	2,317	22,914	48,579	47,289
Berkeley.....	179,550	137,500	63	49	34,600	14,355	280,689	168,818
Fresno.....	65,950	37,950	18	11	16,281	9,079	121,135	113,574
Long Beach.....	423,050	563,700	127	203	565,985	501,975	1,045,205	1,093,880
Pasadena.....	101,825	158,350	19	20	63,626	38,330	220,251	281,330
Sacramento.....	317,900	71,900	65	18	20,895	13,900	381,240	115,219
San Diego.....	224,050	208,545	57	47	498,335	527,910	794,629	768,575
San Francisco.....	1,459,500	424,900	285	84	772,925	724,035	2,469,017	1,591,736
San Jose.....	60,700	47,950	16	15	52,400	14,910	126,710	77,730
Stockton.....	5,450	25,200	10	6	11,175	13,895	37,335	52,877
Vallejo.....	4,780	9,000	3	2	30,433	15,375	45,442	26,636
Colorado:								
Colorado Springs..	5,000	12,100	1	4	8,800	14,475	50,465	30,910
Denver.....	178,000	326,200	48	92	252,300	165,100	547,150	589,450
Pueblo.....	17,700	4,000	7	1	200,852	13,165	238,988	28,749
Montana:								
Butte.....	0	0	0	0	36,800	7,366	46,349	7,566
Great Falls.....	53,200	5,075	15	4	27,651	91,932	96,266	133,507
Oregon:								
Portland.....	369,500	243,550	154	69	286,120	114,020	895,695	508,400
Utah:								
Ogden.....	12,000	2,000	5	1	74,650	3,000	142,350	7,000
Salt Lake City.....	119,300	113,700	34	27	57,105	124,145	205,675	376,738
Washington:								
Bellingham.....	6,300	15,600	6	7	11,500	3,275	25,030	24,645
Everett.....	8,750	7,500	6	3	22,495	37,460	40,605	54,355
Seattle.....	609,520	507,700	188	157	506,135	714,615	1,245,150	1,373,175
Spokane.....	67,350	21,700	23	7	30,140	80,486	130,603	123,981
Tacoma.....	58,000	186,000	19	67	328,305	28,240	427,285	238,615
Total.....	4,537,290	3,254,550	1,243	947	3,978,130	3,781,882	9,897,723	8,561,515
Per cent of change.....		-28.3		-23.8		-4.9		-13.5

WAGES AND HOURS OF LABOR

Hours and Earnings in Foundries and Machine Shops, 1929

IN 1929 the Bureau of Labor Statistics of the United States Department of Labor made a comprehensive study of hours of labor and earnings of wage earners in 399 representative iron foundries and in 508 machine shops in 28 States. The survey covered 131,882 wage earners, of whom 40,391 were employed in foundries and 91,491 in machine shops. Summaries of the results of this study, consisting of average full-time hours per week, average earnings per hour, and average full-time earnings per week, are given in this article. Details of the 1929 study will be available later in bulletin form.

The wage data here given were taken directly from the pay rolls, clock cards, and other records of the companies by agents of the bureau except in the case of a very few companies which made transcripts of their records for the bureau. In most instances the data are for representative pay periods in June, July, or August and are, therefore, representative of conditions in these months.

Table 1 shows average hours and earnings for all wage earners covered in foundries and in machine shops in 1923, 1925, 1927, and 1929 and index numbers of these averages, with the 1923 average as the base or 100 per cent.

Average full-time hours in foundries have decreased rather steadily since 1923, falling from 52.4 per week in that year to 51 hours per week in 1929. Thus, from 1923 to 1929 the decrease amounted to 1.4 hours per week or 2.7 per cent; between 1927 and 1929 the decrease was 0.1 hour per week or a little less than 0.2 per cent. In the machine shops the average full-time hours decreased from 50.8 per week in 1923 to 50.1 in 1927, but increased again to 50.3 hours per week in 1929.

Average earnings per hour in foundries increased from 55.8 cents in 1923 to 61 cents in 1925, and to 62.4 cents in 1927; no change took place between 1927 and 1929. Thus, between 1923 and 1929 the increase was 11.8 per cent. In machine shops earnings per hour increased from 55.9 cents in 1923 to 60.2 cents in 1925, to 62.5 cents in 1927, and to 63.8 cents in 1929. The increase between 1923 and 1929 amounted to 14.1 per cent, and between 1927 and 1929 to 2 per cent.

Full-time earnings per week in foundries increased from \$29.24 in 1923 to \$31.89 in 1927, but decreased to \$31.82 in 1929. Earnings per week did not increase or decrease in the same proportion as average earnings per hour because of the change from year to year in average full-time hours per week.

TABLE 1.—AVERAGE HOURS AND EARNINGS AND INDEX NUMBERS THEREOF, FOR ALL EMPLOYEES, 1923, 1925, 1927, AND 1929

[1923=100]

Year	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time earnings per week	Index numbers of—		
						Average full-time hours per week	Average earnings per hour	Average full-time earnings per week
Foundries:								
1923.....	351	32,166	52.4	\$0.558	\$29.24	100.0	100.0	100.0
1925.....	413	40,393	51.5	.610	31.42	98.3	109.3	107.5
1927.....	417	38,943	51.1	.624	31.89	97.5	111.8	109.1
1929.....	399	40,391	51.0	.624	31.82	97.3	111.8	108.8
Machine shops:								
1923.....	429	58,914	50.8	.559	28.40	100.0	100.0	100.0
1925.....	511	86,274	50.4	.602	30.34	99.2	107.7	106.8
1927.....	526	86,779	50.1	.625	31.31	98.6	111.8	110.2
1929.....	508	91,491	50.3	.638	32.09	99.0	114.1	113.0

In Table 2 data for all of the wage earners included in each occupation in each industry in 1929 are presented in comparison with similar figures for 1927. The averages in Table 2 are given separately for males and for females in each of the principal occupations in foundries and in machine shops for 1927 and 1929, for all males and for all females in all occupations in each industry, and also for both sexes combined—that is, for each industry as a whole.

As the table shows, full-time hours per week of males in foundries in 1929 ranged from 49.6 for hand molders, bench, to 52.2 for crane operators. Those of females ranged from 49.1 for core makers to 51.6 for laborers. Average earnings per hour of males in 1929 ranged from 49.0 cents for laborers to 83.3 cents for pattern makers, and those of females from 38.6 cents for laborers to 46.9 for core makers. Average full-time earnings per week of males in 1929 ranged from \$25.53 for laborers to \$41.73 for pattern makers, and those of females from \$19.92 for laborers to \$23.03 for core makers.

In machine shops the full-time hours of males in 1929 ranged from 49.4 for sheet-metal machine operators to 51.1 for boring-mill operators while those of females ranged from 47.6 for milling-machine operators to 51.0 for laborers. Average hourly earnings of males ranged from 46.9 cents for laborers to 88.8 cents for hammersmiths, while those of females ranged from 34.3 cents for grinding-machine operators to 50.4 cents for milling-machine operators. Full-time weekly earnings of males ranged from \$23.68 for laborers to \$44.67 for hammersmiths, while those of females ranged from \$17.36 for grinding-machine operators to \$23.99 for milling-machine operators.

TABLE 2.—AVERAGE HOURS AND EARNINGS IN FOUNDRIES AND MACHINE SHOPS, 1927 AND 1929, BY OCCUPATION AND SEX

Foundries

Occupation	Sex	Year	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time weekly earnings
Chippers and rough grinders.....	Male.....	1927	379	3,857	51.1	\$0.537	\$27.44
	do.....	1929	367	4,233	51.4	.538	27.65
	Female.....	1927	1	(1)	(1)	(1)	(1)
Coremakers.....	Male.....	1927	401	3,040	50.4	.755	38.05
	do.....	1929	387	3,370	49.9	.744	37.13
	Female.....	1927	41	324	48.4	.491	23.76
	do.....	1929	38	290	49.1	.469	23.03
Crane operators.....	Male.....	1927	242	875	52.6	.575	30.25
	do.....	1929	237	927	52.2	.582	30.38
Cupola tenders.....	do.....	1927	393	602	51.8	.620	32.12
	do.....	1929	364	500	51.0	.634	32.33
Laborers.....	do.....	1927	401	11,017	52.1	.491	25.58
	do.....	1929	384	10,980	52.1	.490	25.53
	Female.....	1927	7	74	51.6	.386	19.92
Molders, hand, bench.....	Male.....	1927	324	2,063	50.5	.789	39.84
	do.....	1929	321	2,098	49.6	.783	38.84
Molders, hand, floor.....	do.....	1927	402	5,375	49.9	.820	40.92
	do.....	1929	385	5,453	50.0	.828	41.40
Molders, machine.....	do.....	1927	220	3,102	50.4	.753	37.95
	do.....	1929	249	3,854	50.4	.734	36.99
Molders' helpers, floor.....	do.....	1927	247	1,820	51.2	.484	24.78
	do.....	1929	251	1,919	51.1	.502	25.65
Patternmakers.....	do.....	1927	259	1,512	50.3	.830	41.75
	do.....	1929	191	1,127	50.1	.833	41.73
Rough carpenters.....	do.....	1927	292	625	50.8	.609	30.94
	do.....	1929	270	509	50.7	.622	31.54
Sand blasters.....	do.....	1927	175	362	51.7	.591	30.55
	do.....	1929	183	337	51.9	.592	30.72
Other employees.....	do.....	1927	365	4,254	51.0	.587	29.94
	do.....	1929	360	4,725	51.2	.592	30.31
	Female.....	1927	15	107	50.6	.380	19.23
	do.....	1929	5	5	50.5	.492	24.85
All occupations.....	Male.....	1927	417	38,504	51.1	.626	31.99
	do.....	1929	399	40,032	51.0	.625	31.88
	Female.....	1927	42	439	49.0	.459	22.49
	do.....	1929	41	359	49.7	.451	22.41
All occupations, male and female.....		1927	417	38,943	51.1	.624	31.89
		1929	399	40,391	51.0	.624	31.82

Machine shops

Assemblers.....	Male.....	1927	368	8,019	50.1	\$0.653	\$32.72
	do.....	1929	335	7,670	50.1	.657	32.92
	Female.....	1927	14	120	49.5	.423	20.94
	do.....	1929	20	190	49.8	.441	21.96
Blacksmiths.....	Male.....	1927	406	845	50.2	.726	36.45
	do.....	1929	397	857	50.1	.742	37.17
Blacksmiths' helpers.....	do.....	1927	291	722	50.2	.525	26.36
	do.....	1929	285	800	49.9	.534	26.65
Boring-mill operators.....	do.....	1927	354	2,208	50.7	.727	36.86
	do.....	1929	372	2,333	51.1	.750	38.33
Crane operators.....	do.....	1927	218	865	51.2	.540	27.65
	do.....	1929	233	980	50.7	.555	28.14
	Female.....	1927	2	4	51.3	.431	22.11
	do.....	1929	2	7	50.7	.425	21.55
Drill-press operators.....	Male.....	1927	433	4,759	50.1	.605	30.31
	do.....	1929	440	5,291	50.3	.628	31.59
	Female.....	1927	22	121	49.4	.448	22.13
	do.....	1929	17	77	49.2	.410	20.17
Fitters and bench hands.....	Male.....	1927	332	6,061	49.5	.662	32.77
	do.....	1929	367	7,715	49.8	.677	33.71
	Female.....	1927	20	341	49.0	.411	20.14
	do.....	1929	14	175	48.6	.450	21.87
Grinding-machine operators.....	Male.....	1927	298	2,285	50.1	.668	33.47
	do.....	1929	313	2,888	51.0	.701	35.75
	Female.....	1927	5	15	48.6	.444	21.58
	do.....	1929	7	19	50.6	.343	17.36

¹ Included in total.

TABLE 2.—AVERAGE HOURS AND EARNINGS IN FOUNDRIES AND MACHINE SHOPS, 1927 AND 1929, BY OCCUPATION AND SEX—Continued

Machine shops—Continued

Occupation	Sex	Year	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time weekly earnings
Hammersmiths ¹	Male	1929	52	226	50.3	\$0.888	\$44.67
Helpers, not otherwise specified ¹	do	1929	322	3,443	50.2	.514	25.80
	Female	1929	1	(¹)	(¹)	(¹)	(¹)
Laborers	Male	1927	450	8,342	50.4	.456	22.98
	do	1929	452	8,506	50.5	.469	23.68
	Female	1929	3	9	51.0	.370	18.87
Lathe operators, engine	Male	1927	414	5,964	50.2	.695	34.89
	do	1929	421	5,640	50.3	.717	36.07
	Female	1927	2	7	48.4	.385	18.63
Lathe operators, turret	Male	1927	343	3,167	50.0	.675	33.75
	do	1929	359	3,855	50.5	.700	35.35
	Female	1927	8	46	50.0	.549	27.45
	do	1929	3	13	48.9	.432	21.12
Machinists	Male	1927	395	3,794	49.5	.728	36.04
	do	1929	379	3,036	49.8	.739	36.80
Machinists' and tool makers' helpers	do	1927	269	1,671	50.1	.510	25.55
	do	1929	229	1,006	50.3	.504	25.35
Milling-machine operators	do	1927	343	2,872	49.7	.685	34.04
	do	1929	358	3,440	50.2	.697	34.99
	Female	1927	3	17	48.8	.489	23.86
	do	1929	5	15	47.6	.504	23.99
Packers and craters	Male	1927	288	1,793	50.1	.537	26.90
	do	1929	239	1,455	50.0	.547	27.35
	Female	1927	7	44	49.5	.389	19.26
	do	1929	15	50	49.0	.371	18.18
Pattern makers	Male	1927	235	1,228	49.6	.841	41.71
	do	1929	288	1,652	49.9	.846	42.22
Planer operators	do	1927	339	1,818	50.5	.742	37.47
	do	1929	344	1,963	50.7	.754	38.23
Polishers and buffers	do	1927	109	580	49.4	.699	34.53
	do	1929	115	587	50.1	.674	33.77
	Female	1927	3	6	49.0	.450	22.05
	do	1929	1	(¹)	(¹)	(¹)	(¹)
Screw-machine operators	Male	1927	213	1,520	49.8	.664	33.07
	do	1929	225	1,899	50.8	.707	35.92
	Female	1927	3	10	48.7	.435	21.18
	do	1929	3	19	49.5	.436	21.58
Sheet-metal machine operators	Male	1927	137	867	50.2	.603	30.27
	do	1929	149	1,136	49.4	.630	31.12
	Female	1927	12	167	48.7	.420	20.45
	do	1929	9	63	48.9	.440	21.52
Tool makers	Male	1927	354	2,863	49.7	.756	37.57
	do	1929	350	2,850	50.0	.780	39.00
Other precision machine operators	do	1927	316	2,001	50.5	.659	33.28
	do	1929	301	1,813	51.0	.655	33.41
	Female	1927	8	122	49.3	.330	16.27
	do	1929	10	210	48.8	.427	20.84
Other skilled employees	Male	1927	468	11,113	50.1	.650	32.57
	do	1929	470	10,786	50.3	.686	34.51
	Female	1927	27	317	47.7	.401	19.13
	do	1929	25	407	50.0	.375	18.75
Other employees	Male	1927	487	9,352	50.3	.526	26.46
	do	1929	467	8,108	50.3	.488	24.55
	Female	1927	20	133	49.3	.309	15.23
	do	1929	18	298	49.0	.345	16.91
All occupations	Male	1927	526	85,309	50.1	.629	31.51
	do	1929	508	89,935	50.3	.641	32.24
	Female	1927	50	1,470	48.9	.403	19.71
	do	1929	56	1,556	49.3	.399	19.67
All occupations, male and female		1927	526	86,779	50.1	.625	31.31
		1929	508	91,491	50.3	.638	32.09

¹ Included in total.² Included with "other skilled employees" in 1927.³ Included with "other employees" in 1927.

It will be noted from a study of the data which are presented in Table 3 that average full-time hours of males in foundries for 1929 in the various States ranged from 45.9 to 56.4 per week, while those

for females ranged from 45.7 to 53 hours. Average earnings per hour of males ranged from 39.6 to 74.5 cents, while those of females ranged from 36.6 to 52.4 cents. Average full-time earnings per week for males ranged from \$20.95 to \$35.11, and those of females from \$17.75 to \$23.95.

In the machine shops the average weekly hours worked by males in 1929 ranged from 45.9 to 54.1, while those worked by females ranged from 47.1 to 51.6. Average hourly earnings of males ranged from 43.4 to 77.9 cents, and those of females from 35.7 to 42.4 cents. Full-time weekly earnings of males ranged from \$22.70 to \$35.76, and those of females from \$17.85 to \$21.31.

In the case of a few large foundries and machine shops the data cover only a representative portion of the total number of the wage earners of such establishments, as the inclusion of the total number would have given them undue weight and might have impaired the representative character of the averages for the States in which these establishments are located.

TABLE 3.—NUMBER OF ESTABLISHMENTS AND OF WAGE EARNERS, AND AVERAGE HOURS AND EARNINGS IN FOUNDRIES AND MACHINE SHOPS, 1927 AND 1929, BY SEX AND STATE

Foundries

Sex and State	Number of establishments		Number of employees		Average full-time hours per week		Average earnings per hour		Average full-time weekly earnings	
	1927	1929	1927	1929	1927	1929	1927	1929	1927	1929
<i>Males</i>										
Alabama.....	4	4	265	190	54.1	53.5	\$0.453	\$0.456	\$24.51	\$24.40
California.....	21	18	1,065	1,185	46.9	45.9	.740	.745	34.71	34.20
Colorado.....	3	3	296	307	47.0	49.2	.577	.596	27.12	29.32
Connecticut.....	16	16	1,537	1,629	52.2	50.8	.592	.611	30.90	31.04
Georgia.....	7	8	493	427	54.5	52.9	.391	.396	21.31	20.95
Illinois.....	28	28	2,835	3,636	49.5	50.5	.609	.665	33.12	33.58
Indiana.....	16	16	2,419	2,446	50.9	52.6	.589	.590	29.98	31.03
Iowa.....	11	9	755	959	53.2	52.9	.615	.614	32.72	32.48
Kansas.....	9	9	228	260	53.9	55.1	.474	.480	25.55	26.45
Kentucky.....	7	7	159	204	48.9	50.6	.500	.512	24.45	25.91
Louisiana.....	5	4	219	246	49.7	56.4	.481	.436	23.91	24.59
Maine.....	4	4	182	248	50.8	50.7	.589	.555	29.92	28.14
Maryland.....	8	7	486	421	52.1	50.9	.554	.558	28.86	28.40
Massachusetts.....	28	28	3,141	2,408	49.6	48.7	.677	.681	33.58	33.16
Michigan.....	39	37	4,389	4,334	51.7	51.9	.640	.644	33.09	33.42
Minnesota.....	5	6	439	457	53.2	52.0	.596	.555	31.71	28.86
Missouri.....	12	15	667	764	51.4	52.1	.629	.610	32.33	31.78
New Hampshire.....	8	6	195	143	49.6	50.9	.635	.599	31.50	30.49
New Jersey.....	17	16	2,380	2,353	52.0	50.6	.627	.636	32.60	32.18
New York.....	25	28	2,747	3,392	50.5	50.1	.657	.647	33.18	32.41
Ohio.....	52	44	4,550	4,323	52.2	51.8	.630	.625	32.89	32.38
Oregon.....	7	5	224	208	45.3	46.1	.659	.677	29.85	31.21
Pennsylvania.....	40	39	5,086	5,285	51.1	51.6	.625	.608	31.94	31.37
Rhode Island.....	8	9	731	1,066	51.5	51.5	.611	.612	31.47	31.52
Tennessee.....	7	7	419	382	49.5	49.2	.470	.461	23.27	22.68
Texas.....	10	6	439	278	51.2	49.8	.470	.488	24.06	24.30
Washington.....	7	7	271	316	46.9	48.3	.693	.727	32.50	35.11
Wisconsin.....	13	13	1,917	2,165	52.3	51.2	.636	.644	33.26	32.97
Total.....	417	399	38,504	40,032	51.1	51.0	.626	.625	31.99	31.88
<i>Females</i>										
Georgia.....		1		(1)		(1)		(1)		(1)
Illinois.....	4	5	60	29	48.8	49.0	.537	.447	26.21	21.90
Indiana.....	2	2	59	39	50.0	50.0	.416	.434	20.80	21.70
Iowa.....	1		(1)		(1)		(1)		(1)	
Kentucky.....	2	2	5	3	47.0	50.0	.446	.412	20.96	20.60
Massachusetts.....	2	1	7	(1)	48.0	(1)	.474	(1)	22.75	(1)
Michigan.....	8	10	84	105	51.6	51.5	.434	.427	22.39	21.99

¹ Included in total.

TABLE 3.—NUMBER OF ESTABLISHMENTS AND OF WAGE EARNERS, AND AVERAGE HOURS AND EARNINGS IN FOUNDRIES AND MACHINE SHOPS, 1927 AND 1929, BY SEX AND STATE—Continued

Foundries—Continued

Sex and State	Number of establishments		Number of employees		Average full-time hours per week		Average earnings per hour		Average full-time weekly earnings ¹	
	1927	1929	1927	1929	1927	1929	1927	1929	1927	1929
<i>Females—Continued</i>										
Minnesota.....	1		(1)		(1)		(1)		(1)	
New Jersey.....	4	4	57	50	49.2	49.8	\$0.451	\$0.466	\$22.19	\$23.21
New York.....	7	5	63	54	45.6	48.8	.501	.489	22.85	23.86
Ohio.....	2	1	23	(1)	49.0	(1)	.406	(1)	19.89	(1)
Pennsylvania.....	3	2	33	19	48.7	48.5	.419	.366	20.41	17.75
Rhode Island.....	2	3	10	11	50.6	53.0	.405	.408	20.49	21.62
Wisconsin.....	4	5	31	37	46.9	45.7	.517	.524	24.25	23.95
Total.....	42	41	439	359	49.0	49.7	.459	.451	22.49	22.41
<i>Males and females</i>										
Alabama.....	4	4	265	190	54.1	53.5	.453	.456	24.51	24.40
California.....	21	18	1,065	1,185	46.9	45.9	.740	.745	34.71	34.20
Colorado.....	3	3	266	307	47.0	49.2	.577	.596	27.12	29.32
Connecticut.....	16	16	1,537	1,629	52.2	50.8	.592	.611	30.90	31.04
Georgia.....	7	8	493	429	54.5	52.9	.391	.395	21.31	20.90
Illinois.....	28	28	2,895	3,665	49.5	50.5	.666	.663	32.97	33.48
Indiana.....	16	16	2,478	2,485	50.9	52.5	.586	.587	29.83	30.82
Iowa.....	11	9	758	959	53.2	52.9	.614	.614	32.66	32.48
Kansas.....	9	9	228	230	53.9	55.1	.474	.480	25.55	26.45
Kentucky.....	7	7	164	207	48.8	50.6	.498	.510	24.30	25.81
Louisiana.....	5	4	219	246	49.7	56.4	.481	.436	23.91	24.59
Maine.....	4	4	182	248	50.8	50.7	.589	.555	29.92	28.14
Maryland.....	8	7	486	421	52.1	50.9	.554	.558	28.86	28.40
Massachusetts.....	28	28	3,148	2,410	49.6	48.7	.677	.680	33.58	33.12
Michigan.....	39	37	4,473	4,439	51.7	51.9	.636	.640	32.88	33.22
Minnesota.....	5	6	443	457	53.1	52.0	.594	.555	31.54	28.86
Missouri.....	12	15	667	764	51.4	52.1	.629	.610	32.33	31.78
New Hampshire.....	8	6	195	143	49.6	50.9	.635	.599	31.50	30.49
New Jersey.....	17	16	2,437	2,403	51.9	50.5	.623	.633	32.33	31.97
New York.....	25	28	2,810	3,446	50.4	50.1	.654	.644	32.96	32.26
Ohio.....	52	44	4,573	4,331	52.2	51.8	.629	.625	32.83	32.38
Oregon.....	7	5	224	208	45.3	46.1	.659	.677	29.85	31.21
Pennsylvania.....	40	39	5,119	5,304	51.1	51.6	.624	.607	31.89	31.32
Rhode Island.....	8	9	741	1,077	51.5	51.5	.608	.610	31.31	31.42
Tennessee.....	7	7	419	382	49.5	49.2	.470	.461	23.27	22.68
Texas.....	10	6	439	278	51.2	49.8	.470	.488	24.06	24.30
Washington.....	7	7	271	316	46.9	48.3	.693	.727	32.50	35.11
Wisconsin.....	13	13	1,948	2,202	52.2	51.1	.634	.643	33.09	32.86
Total.....	417	399	38,943	40,391	51.1	51.0	.624	.624	31.89	31.82

Machine shop

<i>Males</i>										
Alabama.....	6	6	365	284	54.2	50.0	\$0.543	\$0.551	\$29.43	\$27.55
California.....	27	23	2,239	2,133	46.0	45.9	.746	.779	34.32	35.76
Colorado.....		2		654		48.1		.619		29.77
Connecticut.....	19	19	3,416	4,104	50.9	51.0	.639	.639	32.53	32.59
Georgia.....	8	8	336	332	54.3	52.3	.433	.434	23.51	22.70
Illinois.....	38	36	10,086	11,149	49.7	50.0	.685	.691	34.04	34.55
Indiana.....	16	16	2,944	2,965	50.9	51.0	.566	.564	28.81	28.76
Iowa.....	9	6	773	1,032	52.8	54.1	.515	.552	27.19	29.86
Kansas.....	10	10	309	436	51.1	54.1	.518	.508	26.47	27.48
Kentucky.....	9	10	407	624	47.3	50.7	.554	.526	26.20	26.67
Louisiana.....	6	5	252	217	51.5	54.1	.566	.489	29.15	26.45
Maine.....	4	4	466	650	47.8	49.0	.555	.544	26.53	26.66
Maryland.....	8	7	725	705	47.7	50.0	.605	.666	28.86	32.80
Massachusetts.....	40	38	7,707	7,673	48.9	49.3	.611	.630	29.88	31.06
Michigan.....	36	36	5,626	5,580	51.2	51.9	.627	.639	32.10	33.16
Minnesota.....	6	8	656	856	50.1	50.4	.593	.578	29.71	29.13
Missouri.....	21	19	1,343	1,153	51.3	51.4	.676	.574	29.55	29.50
New Hampshire.....	9	6	657	535	50.2	49.0	.638	.625	32.03	30.63
New Jersey.....	31	28	4,016	3,624	49.5	49.5	.647	.685	32.03	33.91

¹ Included in total.

TABLE 3.—NUMBER OF ESTABLISHMENTS AND OF WAGE EARNERS, AND AVERAGE HOURS AND EARNINGS IN FOUNDRIES AND MACHINE SHOPS, 1927 AND 1929, BY SEX AND STATE—Continued

Machine shop—Continued

Sex and State	Number of establishments		Number of employees		Average full-time hours per week		Average earnings per hour		Average full-time weekly earnings	
	1927	1929	1927	1929	1927	1929	1927	1929	1927	1929
<i>Males—Continued</i>										
New York.....	26	32	8,740	8,958	48.5	48.7	\$0.662	\$0.683	\$32.11	\$33.26
Ohio.....	89	85	13,980	13,965	50.3	50.1	.619	.646	31.14	32.36
Oregon.....	6	6	313	306	45.0	47.2	.701	.691	31.55	32.62
Pennsylvania.....	45	48	11,977	12,537	51.2	51.7	.622	.615	31.85	31.80
Rhode Island.....	13	10	1,851	3,104	50.4	50.8	.594	.592	29.94	30.07
Tennessee.....	8	8	458	540	49.2	50.8	.540	.550	26.57	27.94
Texas.....	14	10	853	742	49.8	47.6	.531	.583	26.44	27.75
Washington.....	7	7	481	732	47.2	47.6	.714	.732	33.70	34.84
Wisconsin.....	15	15	4,333	4,255	52.6	51.6	.602	.639	31.67	32.97
Total.....	526	508	85,309	89,935	50.1	50.3	.629	.641	31.51	32.24
<i>Females</i>										
Connecticut.....	1	2	(1)	7	(1)	50.0	(1)	.424	(1)	21.20
Illinois.....	2	6	47	56	51.6	50.7	.391	.377	20.18	19.11
Indiana.....	1	3	(1)	49	(1)	50.0	(1)	.357	(1)	17.85
Kentucky.....	1	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Maine.....	1	—	(1)	—	(1)	—	(1)	—	(1)	—
Massachusetts.....	8	10	84	95	47.9	47.1	.434	.414	20.79	19.50
Michigan.....	16	10	345	261	50.2	51.6	.467	.411	23.44	21.21
New Hampshire.....	1	1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
New Jersey.....	2	2	81	45	50.0	50.0	.377	.397	18.85	19.85
New York.....	3	6	277	411	48.1	47.8	.389	.408	18.71	19.50
Ohio.....	6	7	287	302	49.3	49.2	.345	.382	17.01	18.79
Pennsylvania.....	5	5	192	153	48.1	48.4	.398	.423	19.14	20.47
Rhode Island.....	2	2	67	111	43.0	51.1	.445	.417	19.14	21.31
Tennessee.....	—	1	—	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Wisconsin.....	1	—	(1)	—	(1)	—	(1)	—	(1)	—
Total.....	50	56	1,470	1,556	48.9	49.3	.403	.399	19.71	19.67
<i>Males and females</i>										
Alabama.....	6	6	365	294	54.2	50.0	.543	.551	29.43	27.55
California.....	27	23	2,239	2,133	46.0	45.9	.746	.779	34.32	35.76
Colorado.....	—	2	—	654	—	43.1	—	.619	—	29.77
Connecticut.....	19	19	3,419	4,111	50.9	51.0	.639	.639	32.53	32.59
Georgia.....	8	8	336	332	54.3	52.3	.433	.434	23.51	22.70
Illinois.....	38	36	10,133	11,205	49.7	50.0	.684	.689	33.99	34.45
Indiana.....	16	16	2,976	3,014	50.8	51.0	.564	.561	28.65	28.61
Iowa.....	9	6	773	1,032	52.8	54.1	.515	.552	27.19	29.86
Kansas.....	10	10	309	436	51.1	54.1	.518	.506	26.47	27.48
Kentucky.....	9	10	429	652	47.4	50.9	.540	.512	25.60	26.06
Louisiana.....	6	5	252	217	51.5	54.1	.566	.489	29.15	26.45
Maine.....	4	4	467	650	47.8	49.0	.554	.544	26.48	26.66
Maryland.....	8	7	725	705	47.7	50.0	.605	.656	28.66	32.80
Massachusetts.....	40	38	7,791	7,768	48.9	49.3	.609	.628	29.78	30.96
Michigan.....	36	36	5,971	5,841	51.2	51.8	.619	.630	31.69	32.63
Minnesota.....	6	8	656	856	50.1	50.4	.593	.578	29.71	29.13
Missouri.....	21	19	1,343	1,163	51.3	51.4	.576	.574	29.55	29.50
New Hampshire.....	9	6	685	572	50.2	49.0	.629	.610	31.58	29.89
New Jersey.....	31	28	4,097	3,609	49.5	49.5	.642	.682	31.78	33.76
New York.....	26	32	9,017	9,309	48.5	49.6	.654	.672	31.72	32.66
Ohio.....	89	85	14,267	14,267	50.3	50.1	.614	.641	30.88	32.11
Oregon.....	6	6	313	306	45.0	47.2	.701	.691	31.55	32.62
Pennsylvania.....	45	48	12,169	12,690	51.1	51.7	.619	.612	31.63	31.64
Rhode Island.....	13	10	1,918	3,215	50.2	50.8	.590	.586	29.62	29.77
Tennessee.....	8	8	458	541	49.2	50.8	.540	.550	26.57	27.94
Texas.....	14	10	853	742	49.8	47.6	.531	.583	26.44	27.75
Washington.....	7	7	481	732	47.2	47.6	.714	.732	33.70	34.84
Wisconsin.....	15	15	4,337	4,255	52.6	51.6	.602	.639	31.67	32.97
Total.....	526	508	86,779	91,491	50.1	50.3	.625	.638	31.31	32.09

1 Included in total.

Table 4 presents the data, classified by States, for each of four of the principal occupations in foundries and four in machine shops.

TABLE 4.—AVERAGE HOURS AND EARNINGS FOR 8 SPECIFIED OCCUPATIONS IN FOUNDRIES AND MACHINE SHOPS, 1929, BY OCCUPATION, SEX, AND STATE

Foundry

State	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time weekly earnings	Number of establishments	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time weekly earnings
Laborers, male						Molders, hand, floor, male				
Alabama	4	64	53.4	\$0.297	\$15.86	4	39	53.5	\$0.727	\$38.89
California	18	295	46.4	.585	27.14	18	207	44.9	.966	43.37
Colorado	3	55	51.0	.424	21.62	3	33	48.4	.849	41.09
Connecticut	16	481	51.7	.501	25.90	16	286	48.2	.801	38.61
Georgia	8	157	54.5	.261	14.22	8	54	50.7	.742	37.62
Illinois	28	1,067	50.6	.541	27.37	23	438	49.5	.864	42.77
Indiana	16	865	53.9	.462	24.90	16	347	51.7	.768	39.71
Iowa	9	247	53.9	.483	26.03	9	129	51.1	.802	40.98
Kansas	9	63	54.2	.369	20.00	9	54	54.4	.632	34.38
Kentucky	6	57	50.1	.387	19.39	7	51	51.5	.634	32.65
Louisiana	4	106	56.6	.293	16.58	4	52	56.5	.731	41.30
Maine	1	(1)	(1)	(1)	(1)	4	46	48.2	.696	33.55
Maryland	7	91	53.7	.391	21.00	7	81	49.0	.790	38.71
Massachusetts	26	493	48.7	.518	25.23	28	312	48.4	.918	44.43
Michigan	33	1,147	52.7	.533	28.09	34	435	51.5	.804	41.41
Minnesota	3	114	53.1	.449	23.84	6	62	52.0	.715	37.18
Missouri	15	169	53.7	.431	23.14	13	146	51.8	.785	40.66
New Hampshire	6	17	50.5	.456	23.03	6	37	51.1	.714	36.49
New Jersey	14	723	50.8	.499	25.35	16	246	50.2	.886	44.48
New York	27	1,000	51.5	.534	27.50	27	370	48.9	.847	41.42
Ohio	44	1,356	53.4	.467	24.94	40	657	50.4	.878	44.25
Oregon	5	38	46.1	.514	23.70	5	32	46.3	.852	39.45
Pennsylvania	38	1,350	52.7	.468	24.66	37	708	50.7	.805	40.81
Rhode Island	9	230	52.2	.514	26.83	8	131	50.4	.775	39.06
Tennessee	7	100	49.1	.291	14.29	7	74	49.0	.750	36.75
Texas	5	86	52.8	.343	18.11	6	55	47.4	.728	34.51
Washington	7	62	48.5	.573	27.79	7	63	48.4	.882	42.60
Wisconsin	13	514	53.1	.515	27.36	12	308	48.7	.863	42.03
Total	384	10,980	52.1	.490	25.53	385	5,453	50.0	.828	41.40
Molders, machine, male						Pattern makers, male				
Alabama	1	(1)	(1)	(1)	(1)	3	10	52.7	\$0.767	\$40.42
California	8	20	46.7	\$0.685	\$31.99	10	32	44.8	1.094	48.83
Colorado	2	22	49.4	.647	31.96	3	20	44.4	.985	43.73
Connecticut	8	118	55.8	.667	37.22	5	12	55.4	.703	38.95
Georgia	3	18	52.7	.630	33.20	6	12	50.7	.802	40.66
Illinois	17	387	50.1	.780	39.08	22	149	50.2	.797	40.01
Indiana	11	244	50.9	.716	36.44	9	54	52.0	.963	50.06
Iowa	6	89	52.1	.707	36.83	6	17	52.5	.730	38.33
Kansas	5	17	54.7	.588	32.16	6	8	55.1	.824	45.40
Kentucky	2	16	50.0	.519	25.95	1	(1)	(1)	(1)	(1)
Louisiana	2	3	58.0	.397	23.03	1	(1)	(1)	(1)	(1)
Maine	1	(1)	(1)	(1)	(1)	1	(1)	(1)	(1)	(1)
Maryland	4	39	51.2	.609	31.18	6	24	48.8	.796	38.84
Massachusetts	23	284	48.4	.704	38.43	8	124	48.4	.731	35.38
Michigan	25	566	51.5	.679	34.97	21	151	50.6	.901	45.59
Minnesota	4	34	51.2	.633	32.41	2	6	49.8	.714	35.56
Missouri	9	44	50.6	.710	35.93	10	33	49.2	.991	48.76
New Hampshire	2	10	52.8	.585	30.89	3	4	53.0	.717	38.00
New Jersey	14	180	50.4	.817	41.18	11	102	50.4	.864	43.55
New York	20	434	49.5	.723	35.79	11	103	49.9	.820	40.92
Ohio	26	427	49.4	.814	40.21	12	70	50.3	.820	41.25
Oregon	1	(1)	(1)	(1)	(1)	3	7	45.1	.934	42.12
Pennsylvania	20	413	49.8	.724	36.06	14	110	51.0	.766	39.07
Rhode Island	8	176	52.2	.717	37.43	1	(1)	(1)	(1)	(1)
Tennessee	2	7	49.1	.481	23.62	2	6	49.7	.926	46.52
Texas	2	12	46.3	.656	30.47	4	6	47.9	.853	42.30
Washington	3	11	48.0	.786	37.73	4	16	48.0	1.029	49.39
Wisconsin	11	255	50.2	.759	38.10	6	35	52.6	.762	40.06
Total	249	3,854	50.4	.734	36.99	191	1,127	50.1	.833	41.73

¹ Included in total.

TABLE 4.—AVERAGE HOURS AND EARNINGS FOR 8 SPECIFIED OCCUPATIONS IN
FOUNDRIES AND MACHINE SHOPS, 1929, BY OCCUPATION, SEX, AND STATE—
Continued*Machine shops*

State	Num- ber of estab- lish- ments	Num- ber of employ- ees	Aver- age full- time hours per week	Aver- age earn- ings per hour	Aver- age full- time weekly earn- ings	Num- ber of estab- lish- ments	Num- ber of employ- ees	Aver- age full- time hours per week	Aver- age earn- ings per hour	Aver- age full- time weekly earn- ings
	Fitters and bench hands, male					Laborers, male				
Alabama.....	2	13	50.3	\$0.604	\$34.91	5	58	50.7	\$0.299	\$15.16
California.....	20	204	45.0	.848	38.16	17	180	46.1	.573	26.42
Colorado.....	2	41	48.1	.628	30.21	2	68	48.0	.466	22.37
Connecticut.....	19	659	51.1	.667	34.08	19	360	51.0	.476	24.28
Georgia.....	2	4	50.1	.588	29.46	7	68	52.1	.240	12.50
Illinois.....	29	788	49.4	.732	36.16	28	1,313	49.8	.509	25.35
Indiana.....	13	163	51.1	.627	32.04	16	330	50.9	.430	21.89
Iowa.....	4	19	53.2	.624	33.20	6	167	54.0	.442	23.87
Kansas.....	3	16	54.4	.524	28.51	8	75	54.4	.366	19.91
Kentucky.....	9	57	50.2	.631	31.68	7	50	50.5	.372	18.79
Louisiana.....	1	(1)	(1)	(1)	(1)	3	55	58.0	.280	16.24
Maine.....	2	17	48.9	.493	24.11	4	39	48.3	.420	20.29
Maryland.....	1	(1)	(1)	(1)	(1)	5	40	51.0	.429	21.88
Massachusetts.....	27	356	49.0	.660	32.34	35	619	49.6	.484	24.01
Michigan.....	23	283	51.4	.657	33.77	31	480	51.9	.479	24.86
Minnesota.....	4	17	49.6	.619	30.70	8	88	50.8	.426	21.64
Missouri.....	10	80	52.0	.555	28.86	12	103	52.0	.408	21.22
New Hampshire.....	3	35	49.2	.664	32.67	5	29	48.5	.462	22.41
New Jersey.....	24	545	49.2	.734	36.11	26	406	49.5	.507	25.10
New York.....	27	936	48.8	.730	35.62	30	737	48.7	.511	24.89
Ohio.....	61	1,786	49.3	.648	31.95	82	1,205	49.8	.463	23.06
Oregon.....	3	19	47.2	.747	35.26	4	7	46.3	.509	23.57
Pennsylvania.....	43	899	51.0	.649	33.10	48	1,337	52.0	.443	23.04
Rhode Island.....	8	340	50.5	.593	29.95	10	212	50.5	.458	23.13
Tennessee.....	3	11	48.2	.653	31.47	7	89	50.6	.333	16.85
Texas.....	5	34	48.2	.734	35.38	7	74	48.6	.404	19.63
Washington.....	6	62	47.6	.760	36.18	5	32	48.3	.529	25.55
Wisconsin.....	13	324	52.0	.658	34.22	15	285	52.1	.482	25.11
Total.....	367	7,715	49.8	.677	33.71	452	8,506	50.5	.469	23.68
	Lathe operators, engine, male					Toolmakers, male				
Alabama.....	3	29	51.4	\$0.736	\$37.52	2	2	49.5	\$0.751	\$37.17
California.....	20	248	45.5	.859	39.08	15	77	45.9	.983	45.12
Colorado.....	2	28	48.1	.720	34.63	2	25	48.0	.761	36.53
Connecticut.....	18	336	51.2	.674	34.51	17	145	51.4	.809	41.58
Georgia.....	5	38	51.7	.597	30.86	4	10	51.8	.717	37.14
Illinois.....	30	613	50.7	.770	39.04	26	366	49.9	.783	39.07
Indiana.....	13	90	51.4	.671	34.49	14	76	50.4	.758	38.20
Iowa.....	6	64	53.2	.626	33.30	2	15	54.4	.684	37.21
Kansas.....	5	34	51.1	.685	35.00	4	7	54.0	.649	35.05
Kentucky.....	7	27	48.7	.644	31.36	6	13	50.2	.769	38.60
Louisiana.....	3	16	54.3	.670	36.38					
Maine.....	3	22	47.3	.579	27.39	4	11	48.9	.680	33.25
Maryland.....	5	39	51.7	.655	33.86	4	73	49.7	.798	39.66
Massachusetts.....	31	468	49.9	.654	32.63	31	364	50.3	.737	37.07
Michigan.....	27	316	51.2	.679	34.76	27	144	51.8	.827	42.84
Minnesota.....	8	52	50.7	.658	33.36	7	22	51.3	.695	35.65
Missouri.....	14	128	49.9	.689	34.38	11	28	51.5	.680	35.02
New Hampshire.....	5	44	49.3	.650	32.05	2	19	48.3	.778	37.58
New Jersey.....	24	212	49.7	.769	38.22	13	88	49.5	.797	39.45
New York.....	29	487	48.6	.777	37.76	27	367	48.4	.826	39.98
Ohio.....	74	953	50.5	.702	35.45	58	463	49.9	.784	39.12
Oregon.....	6	52	47.1	.793	37.35	3	4	45.0	.854	38.43
Pennsylvania.....	42	687	52.1	.732	38.14	37	197	51.1	.753	38.48
Rhode Island.....	9	208	51.6	.614	31.68	8	178	51.0	.686	34.99
Tennessee.....	6	35	50.8	.717	36.42	3	10	50.8	.800	40.64
Texas.....	6	125	46.9	.704	33.02	4	22	47.3	.853	40.35
Washington.....	6	69	47.5	.788	37.43	6	14	47.7	.830	39.59
Wisconsin.....	14	220	51.3	.722	37.04	13	110	50.7	.759	38.48
Total.....	421	5,640	50.3	.717	36.07	350	2,850	50.0	.780	39.00

1 Included in total.

Recent Changes in Wages and Hours of Labor

INFORMATION received by the Bureau of Labor Statistics regarding recent wage changes is presented below in two distinct groups: Part 1 relates to manufacturing establishments only, the data being reported direct to the bureau by the same establishments that report monthly figures regarding volume of employment; part 2 presents data obtained from new trade agreements and other miscellaneous sources. Effort is made to avoid duplication of data as between parts 1 and 2, but this is not always possible.

Part 1. Wage Changes reported by Manufacturing Establishments, November, 1929

THIRTY-FIVE establishments in 13 industries reported wage-rate increases during the month ending December 15, 1929. These increases averaged 9.2 per cent and affected 8,610 employees, or 59 per cent of all employees in the establishments concerned.

Twenty-three establishments in 11 industries reported wage-rate decreases during the same period. These decreases averaged 9 per cent and affected 1,622 employees, or 71 per cent of all employees in the establishments concerned.

WAGE ADJUSTMENTS OCCURRING BETWEEN NOVEMBER 15 AND DECEMBER 15, 1929

Industry	Establishments		Per cent of increase or decrease in wage rate		Employees affected		
	Total number reporting	Number reporting increase or decrease in wage rates	Range	Average	Total number	Per cent of employees	
						In establishments reporting increase or decrease in wage rates	In all establishments reporting
			Increases				
Hosiery and knit goods.....	318	4	5.0	5.0	500	62	1
Silk goods.....	275	1	7.0	7.0	37	7	(1)
Rayon.....	18	1	5.0	5.0	1,000	50	4
Foundry and machine-shop products.....	1,025	2	2.7- 8.7	4.5	397	71	(1)
Machine tools.....	149	2	4.4- 7.3	4.8	26	20	(1)
Lumber, sawmills.....	628	1	6.4	6.4	262	100	(1)
Furniture.....	408	1	7.0	7.0	65	100	(1)
Paper boxes.....	177	1	10.0	10.0	27	18	(1)
Printing, book and job.....	379	7	2.0-10.0	3.2	210	7	(1)
Printing, newspapers.....	450	8	1.1- 3.5	3.3	299	20	(1)
Brick, tile, and terra cotta.....	608	1	10.0	10.0	46	90	(1)
Glass.....	132	1	9.5	9.5	746	100	2
Automobiles.....	209	5	6.0-20.0	11.7	4,995	100	2
			Decreases				
Slaughtering and meat packing.....	202	1	10.0	10.0	107	100	(1)
Silk goods.....	275	1	10.0	10.0	55	100	(1)
Woolen and worsted goods.....	179	1	10.0	10.0	181	100	(1)
Carpets and rugs.....	27	2	5.0	5.0	150	34	1
Lumber, sawmills.....	628	4	6.0-10.0	6.6	350	57	(1)
Lumber, millwork.....	318	2	10.0	10.0	55	83	(1)
Paper and pulp.....	203	1	10.0	10.0	150	100	(1)
Brick, tile, and terra cotta.....	608	8	10.0-20.0	11.3	301	95	1
Pottery.....	112	1	10.0	10.0	28	85	(1)
Automobiles.....	209	1	10.0	10.0	75	49	(1)
Carriages and wagons.....	47	1	10.0	10.0	170	100	15

¹ Less than one-half of 1 per cent.

Part 2.—Wage Changes Reported by Trade-Unions Since October, 1929

THE changes shown in Tables 2 and 3 cover workers in various trade groups. In the building-trades group increases ranged from 3½ cents per hour for carpenters in Sioux City, Iowa, to 25 cents per hour in Sedalia, Mo., the majority receiving 12½ cents per hour or more. Printing-trades increases ranged from \$1 to \$4.50 per week; those of railroad workers from 2 to 5 cents per hour; and those of steamboat men from \$5 per month for cooks, deck hands, oilers, and firemen to \$10 per month for captains, engineers, and assistants, pilots and mates. Other smaller groups or individual trades increased either in time or piece rates.

TABLE 2.—RECENT UNION WAGE CHANGES, BY INDUSTRY, OCCUPATION, AND LOCALITY, OCTOBER, 1929, TO JANUARY, 1930

Industry, occupation, and locality	Date of change	Rate of wage		Hours per week	
		Before change	After change	Before change	After change
Building trades:		<i>Per hour</i>	<i>Per hour</i>		
Carpenters, Sioux City, Iowa.....	Jan. 1	\$1.06¼	\$1.09½	44	44
Cement finishers, Houston, Tex.....	Nov. 24	1.25	1.37½	44	40
Inside wiremen, Rock Island, Ill.....	Jan. 1	1.18¾	1.25	48	48
Painters, Cleveland, Ohio.....	Oct. 1	1.25	1.31¼	44	40
Plasterers—					
Houston, Tex.....	Nov. 24	1.62½	1.75	44	40
Sedalia, Mo.....	Oct. 1	1.25	1.50	44	44
Tacoma, Wash.....	do	1.37½	1.50	44	44
Sheet-metal workers, Washington, D. C.....	Jan. 1	1.43¾	1.50	44	44
Structural iron workers, Seattle, Wash.....	do	1.12½	1.25	44	40
All building trades, Oakland, Calif.....	do	(1)	(1)	44	40
Chauffeurs and teamsters: Laundry drivers, Chicago, Ill.....	Nov. 1	<i>Per week</i> 37.50	<i>Per week</i> 38.50	(1)	(1)
Clothing: Pants and coat makers, Vineland, N. J.....	Nov 15	(1)	(2)	48	44
Upholsterers: New York—Interior decorating.....	Oct. 25	<i>Per day</i> 6.60	<i>Per day</i> 7.26	(1)	(1)
Mining: Terre Haute, Ind.....	(1)	2.50	6.10	48	48
Motion-picture operators, actors, and theatrical workers: San Diego, Calif., operators.....	Dec. 1	<i>Per week</i> 55.00	<i>Per week</i> 75.00	37½	36
Printing and publishing:					
Compositors—					
Brooklyn, N. Y.—					
Newspaper, day.....	Oct. 1	65.00	68.50	39	39
Newspaper, night.....	do	68.00	71.50	36	36
Job work, day.....	do	53.00	55.00	42	42
Job work, night.....	do	56.00	58.00	40	40
Butte, Mont.—					
Newspaper, day.....	do	43.50	48.00	45	45
Newspaper, night.....	do	46.50	51.00	(1)	(1)
Job work.....	do	41.00	45.50	44	44
Erie, Pa.—					
Newspaper, day.....	do	50.00	50.00	48	45
Newspaper, night.....	do	53.00	53.00	48	45
Lawrence, Mass., newspaper.....	Nov. 1	43.00	43.00	48	45
Photo-engravers, Portland, Oreg.....	Jan. 1	57.50	60.00	44	44
Stereotypers:					
Plainfield, N. J., newspaper.....	do	<i>Per day</i> 8.83¾	<i>Per day</i> 9.00	48	48
Schenectady, N. Y.—					
Newspaper, day.....	Nov. 1	<i>Per week</i> 49.00	<i>Per week</i> 50.00	48	45
Newspaper, night.....	do	52.50	53.50	48	45
Spokane, Wash.....	Jan. 4	42.00	43.50	48	48

¹ Not reported.² Increase, 5 per cent.³ Minimum.

TABLE 2.—RECENT UNION WAGE CHANGES, BY INDUSTRY, OCCUPATION, AND LOCALITY, OCTOBER, 1929, TO JANUARY, 1930—Continued

Industry, occupation, and locality	Date of change	Rate of wage		Hours per week	
		Before change	After change	Before change	After change
Railway workers:		<i>Per hour</i>	<i>Per hour</i>		
Birmingham, Ala.—					
Signal maintainers.....	Nov. 1	\$0.78	\$0.80	48	48
Assistant signalmen.....	do	.54	.56	48	48
Signal helpers.....	do	.52	.54	48	48
Johnsonburg, Pa.—					
Signalmen, maintainers.....	Dec. 1	.75	.80	48	48
Helpers.....	do	.50	.55	48	48
Macon, Ga.—					
Signalmen and maintainers.....	do	3.75	3.80	48	48
Helpers.....	do	.49	.54	48	48
Assistants.....	do	3.51	3.56	48	48
Nashville, Tenn.—					
Signalmen.....	Nov. 1	.78	.80	48	48
Assistants.....	do	.68	.70	48	48
Helpers.....	do	.49	.51	48	48
Steamboatmen:		<i>Per month</i>	<i>Per month</i>		
New York, railroad-owned boats, captains, pilots, engineers, etc.	(1)	(1)	4 5.00	(1)	(1)
New York Harbor, towboats, single crew, self-propelled vessels other than those engaged in transport work—					
Class A—					
Captains.....	Oct. 15	180.00	190.00	(1)	60
Engineers.....	do	170.00	180.00	(1)	60
Class B—					
Captains.....	do	170.00	180.00	(1)	60
Engineers.....	do	160.00	170.00	(1)	60
Class C—					
Captains.....	do	160.00	170.00	(1)	60
Engineers.....	do	150.00	160.00	(1)	60
Firemen.....	do	95.00	100.00	(1)	60
Do.....	do	85.00	90.00	(1)	60
Deck hands.....	do	85.00	90.00	(1)	60
Cooks.....	do	85.00	90.00	(1)	60
Double crew, self-propelled vessels engaged in general towing and harbor work—					
Class A—					
Captains.....	do	220.00	230.00	(1)	60
Engineers.....	do	210.00	220.00	(1)	60
Pilot-mates.....	do	180.00	190.00	(1)	60
Assistant engineers.....	do	180.00	190.00	(1)	60
Class B—					
Captains.....	do	210.00	220.00	(1)	60
Engineers.....	do	200.00	210.00	(1)	60
Pilot-mates.....	do	170.00	180.00	(1)	60
Assistant engineers.....	do	170.00	180.00	(1)	60
Firemen.....	do	90.00	95.00	(1)	60
Do.....	do	80.00	85.00	(1)	60
Oilers.....	do	90.00	95.00	(1)	60
Deck hands.....	do	90.00	95.00	(1)	60
Do.....	do	80.00	85.00	(1)	60
Cooks.....	do	85.00	90.00	(1)	60
Vessels engaged in mud and sand towing—					
Captains.....	do	245.00	250.00	(1)	60
Engineers.....	do	235.00	240.00	(1)	60
Pilots or mates.....	do	206.00	211.00	(1)	60
Assistant engineers.....	do	206.00	211.00	(1)	60
Firemen.....	do	90.00	95.00	(1)	60
Oilers.....	do	90.00	95.00	(1)	60
Deck hands.....	do	80.00	85.00	(1)	60
Cooks.....	do	100.00	105.00	(1)	60

¹ Not reported.² Minimum.⁴ Increase.

TABLE 3.—RECENT CHANGES IN RATE PER 100-FOOT BOX FOR WINDOW-GLASS CUTTERS

Kind of window glass	Chicago, Ill.		Toledo, Ohio	
	Rate October, 1928	Rate October, 1929	Rate October, 1928	Rate October, 1929
Single strength.....	\$0. 48	\$0. 51	\$0. 46	\$0. 50
Double strength.....	.52	.54	.50	.55
Single strength, one fraction.....	1. 15	1. 15	1. 15	1. 15
Single strength, two fractions.....	1. 30	1. 30	1. 30	1. 30
Double strength, one fraction.....	1. 20	1. 20	1. 20	1. 20
Double strength, two fractions.....	1. 40	1. 40	1. 40	1. 40
29 to 32 ounces, inclusive.....	.55	.65	.50	.60
32 to 46 ounces or $\frac{3}{16}$ -inch, glazing quality.....	1. 15	1. 18	-----	1. 18
All silvering qualities.....	2. 20	2. 20	2. 20	2. 20
Stock sheets 84 united inches and over.....	.78	.78	.78	.78
Stock sheets under 84 united inches.....	1. 09	1. 00	1. 09	1. 00

¹ Extra per 50-foot box.

Double price for all sizes under 14 united inches.

Price and one-half for all selected qualities better than A quality in single and double strengths.

October, 1928.—Template cutters receive minimum of \$7 per day and 20 cents extra per 100-foot case for all cases cut over 32—100-foot cases per day. Cutters other than template cutters shall receive \$7.70 per day for a 9-hour day.

October, 1929.—Template cutters shall receive minimum of \$8 per day and 20 cents extra per 100-foot case for all cases cut over 36—100-foot cases per day. Cutters other than template cutters shall receive 90 cents per hour.

Wages of Civilian Employees of the United States Naval Establishment in 1930

UNDER date of November 27, 1929, the Secretary of the Navy issued a statement extending through 1930 the schedule of wages in effect during 1929 for all civilian employees in the United States Naval Establishment and the field service of the United States Marine Corps. The 1929 schedule was published in detail in the Labor Review for February, 1929 (pp. 104–107).

Extent of the Five-Day Week in Manufacturing Industries

THE results of a study of the 5-day week in manufacturing industries by the National Industrial Conference Board were recently published.¹ In this study the board undertook to assemble the data available to show, as nearly as possible, the present extent of the 5-day week in manufacturing industries; the reduction or redistribution of the weekly hours and the effect upon production; the reasons for its adoption; and the judgment of the executives of these companies as to its effectiveness as a regular work schedule.

The report shows 270 industrial establishments, employing in the aggregate 216,921 wage earners operating on a year-round 5-day week schedule, at the end of the year 1928.

The investigation discloses that the adoption of the 5-day week does not necessarily involve a reduction in the total number of hours of work per week, unless the weekly schedule on a 5½ or a 6 day basis is above 50 hours. Of the 219 establishments reporting the weekly schedule of hours after making the change to the 5-day week, 27

¹ National Industrial Conference Board (Inc.). The Five-Day Week in Manufacturing Industries. New York, 1929.

companies report that the change was effected without a change in the total hours; 3 companies report a slight increase in working hours. Of the 189 companies making a reduction in the hours per week, 104 reduced their working schedule to 40 hours.

Data on the weekly output under the 5-day schedule as compared with the former 5½ and 6 day schedule were obtained from 127 establishments. Of 94 companies that had reduced the total hours per week, 6 companies reported a substantial loss in output and 24 companies a loss in proportion to the reduction in the hours; 46 companies reported no change in output and 18 companies reported an increase. Since the hours of this group were reduced in changing to the 5-day week it would seem that nearly 70 per cent of these companies suffered no loss in total output per week and are, therefore, obtaining greater output per hour than under the longer working schedule. Of the 32 companies reporting no change in working hours, 17 reported no change in output, 14 reported an increase, and only 1 reported a decrease. The one company reporting an increase in the total number of hours reports no change in the output.

The following quotations made from letters received by the conference board from companies operating on the 5-day week schedule give their reasons for the change to the 5-day week, as well as the advantages they find in its operation.

Efficient working pitch better maintained by concentration into fewer days, with proper rest intervals to relieve any strain of longer daily hours when nature of work makes this desirable. Reduced need for days off or lengthy vacation periods.

Greater relaxation over the week-end gives added pep to week's work.

The change to the 5-day week was made because of the desire to provide more leisure for our working force, and it might also be interesting to you to know that our production increased since the installation of the 5-day week without additional force; also that our rate of illness has decreased about 30 per cent and our rate of lateness has decreased about 80 per cent.

We have many married women who need more time for shopping and housework. Under the old system our attendance was bad on Saturday and we never received a half-day's work. Now our attendance is perfect and our labor turnover is less than 1 per cent per month.

Universal satisfaction. Our workers come to our village from many cities and towns by trolley or automobile. They appreciate the privilege of omitting one round trip and the double rest day. Office and shipping employees wish it were practicable for them also to enjoy the entire Saturday off.

They [employees] are strongly in favor of it; in fact, prefer to do overtime work at night rather than interfere with the Saturday holiday. It is our opinion that the person who "gets up and at it" reasonably early in the morning and sticks to it a little longer in the afternoon, with one full holiday on Saturday, has an advantage over the one who sleeps a little later, quits a little earlier, and thus gets his off time in useless dribblets.

Enthusiastic approval of over 80 per cent of workers by actual vote. Powerful stimulus to morale. Next to bonus, best continuous effect of anything company has ever done.

The report makes the following statement concerning the attitude of employers who consider the 5-day week schedule disadvantageous:

The attitude of employers operating a 5-day schedule but considering it disadvantageous seems to be strongly influenced by whether or not the 5-day week was introduced with their full approval or was forced upon them by organized labor. It is natural that they should resent a program they have been compelled to accept, and that they should magnify its shortcomings, just as on the other side there may be a tendency to minimize the disadvantages of a plan which has been voluntarily introduced. Some union-shop employers declared themselves satisfied that the 5-day schedule is desirable, but others made no attempt to

conceal their disapproval of a program of fewer hours of work and unreduced pay, which they view as little short of confiscation, and have been outspoken and caustic in their criticisms.

In concluding the report states:

This evidence does, however, remove the 5-day week from the status of a radical and impractical administrative experiment and places it among the plans which, however revolutionary they may appear to some, have demonstrated both practicability and usefulness under certain circumstances. An employer who is interested in the adaptability of the 5-day schedule to his own business may, therefore, approach the problem as a working schedule that has been in force for a number of years in various establishments with generally satisfactory results.

Following is a list of representative companies operating on a regular 5-day week basis, as given in the report.

COMPANIES OPERATING ON A 5-DAY WEEK BASIS

Company	Location	Product
Simon Ackerman Clothes Co.	Rochester, N. Y.	Clothing.
Addison Lithograph Co.	do.	Lithographing.
American Chiclé Co.	Long Island City, N. Y.	Chewing gum.
Amos Abbott Co.	Dexter, Me.	Woolens.
Beatty Page (Inc.)	New York City	Printing.
Bellman Brook Bleachery Co.	Fairview, N. J.	Dyeing and bleaching.
Bemis Car Truck Co.	Springfield, Mass.	Railroad supplies.
E. W. Bliss Co.	Brooklyn, N. Y.	Machinery.
Simon Bomzer Co.	New York City	Clothing.
Boston Bank Note Co.	Boston, Mass.	Lithographing.
Moto Meter Co. (Inc.)	Long Island City, N. Y.	Motometers.
C. C. Bradley & Son (Inc.)	Syracuse, N. Y.	Power hammers.
Breslin Bros. Carpet Co.	Gloucester, N. J.	Carpets.
Bristol Myers Co.	Hillside, N. J.	Chemicals.
Chicago Carton Co.	Chicago, Ill.	Paper boxes and cartons.
Consolidated Fruit Jar Co.	New Brunswick, N. J.	Stamped metalware.
Consolidated Lithographic Co.	Brooklyn, N. Y.	Lithographing.
Consolidated Paper Co.	Monroe, Mich.	Paper board.
Continental Mills	Philadelphia, Pa.	Textiles.
Cranshaw Carpet Co.	Newburgh, N. Y.	Carpets.
Curtis Publishing Co.	Philadelphia, Pa.	Printing and publishing.
Henry A. Dix Corporation	New York City	Uniform dresses.
Dorf & Co.	Baltimore, Md.	Hats and caps.
Doubleday Doran & Co. (Inc.)	Garden City, Long Island, N. Y.	Publishers.
Douglas Mack Co.	New York City	Clothing.
L. A. Dreyfus Co.	Rosebank, Staten Island, N. Y.	Gutta-percha.
E. R. Durkee & Co.	Elmhurst, Long Island, N. Y.	Salad dressing and spices.
Dutchess Hat Works	Beacon-on-Hudson, N. Y.	Hats.
Eberhard Faber Pencil Co.	Brooklyn, N. Y.	Lead pencils.
Eberhard Faber Pencil Co. (rubber division).	Newark, N. J.	Rubber sundries.
Elson-Freeman Co. (Inc.)	New York City	Lithographing.
J. Elmer & Sons Co. (Inc.)	Brooklyn, N. Y.	Clothing.
Electric Meter Corporation	New York City	Electric meters.
Empire Lithographing Co.	do.	Lithographing.
Empire Worsted Mills Co.	Jamestown, N. Y.	Textiles.
Ford Motor Car Co.	Detroit, Mich.	Automobiles.
Robert Gair Co.	New York City	Paper board and boxes.
Gardner & Harvey Co.	Middletown, Ohio	Do.
Wm. P. Goldman and Bros. (Inc.)	New York City	Clothing.
A. Goldstein & Co.	do.	Boys' clothing.
Goodman and Levine	Rochester, N. Y.	Clothing.
Gordon and Friedman	New York City	Do.
Grinnell Lithographic Co.	do.	Lithographing.
Grossman Clothing Co.	do.	Clothing.
J. J. Grover's Sons Co.	Stoneham, Mass.	Shoes.
Frederick Gumbrecht Co.	Brooklyn, N. Y.	Lithographing.
Karl Gut Lithographing Co.	Bronx, N. Y.	Do.
Hardwood Counter Co.	Lynn, Mass.	Shoe counters.
Haroldite Finishing Co.	Taunton, Mass.	Dyeing and finishing.
R. R. Heywood Co.	New York City	Lithographing.
Hoag & Walden (Inc.)	Lynn, Mass.	Shoes.
Hochscheid's Pants Co.	Mount Healthy, Ohio	Clothing.
L. Hoffman Co.	New York City	Paper boxes.
Horowitz Bros. & Margaretan	do.	Matzo and noodles.
F. C. Huyck & Sons	Albany, N. Y.	Woolens.
Ilg Ventilating Co.	Chicago, Ill.	Heating and ventilating apparatus.

COMPANIES OPERATING ON A 5-DAY WEEK BASIS—Continued

Company	Location	Product
Jenkins Bros.	Bridgeport, Conn.	Valves.
Jenkins Bros. (rubber division)	Elizabeth, N. J.	Rubber goods.
Joseph & Feiss Co.	Cleveland, Ohio	Clothing.
Kahn Tailoring Co.	Indianapolis, Ind.	Do.
Karle Lithograph Co.	Rochester, N. Y.	Lithographing.
Keller-Heumann Thompson Co.	do.	Clothing.
Kessner & Rabinowitz Co.	Union City, N. J.	Hats.
Kirkman & Sons.	Brooklyn, N. Y.	Soap.
Lamm Bros.	Boston, Mass.	Clothing.
Larus & Brother Co.	Richmond, Va.	Tobacco.
Latham Lithographing & Printing Co.	Long Island City, N. Y.	Lithography.
C. M. & D. B. Leavitt Co.	Haverhill, Mass.	Shoes.
Le Roy Latham Printing Co.	Woodside, Long Island, N. Y.	Printing and lithographing.
Lipps Bros.	New York City	Clothing.
J. Lipson & Co.	do.	Do.
Malden Knitting Mills.	Malden, Mass.	Woolens.
Maryland Color Printing Co.	Baltimore, Md.	Printing.
Metal Hose & Tubing Co. (Inc.)	Brooklyn, N. Y.	Metal tubing and hose.
Michaels Stern & Co.	Rochester, N. Y.	Clothing.
Monarch Manufacturing Co.	Milwaukee, Wis.	Work suits.
Leopold Morse Co. (Inc.)	Boston, Mass.	Clothing.
National Meter Co.	Brooklyn, N. Y.	Water and oil meters.
N. E. Iron Works Co.	Boston, Mass.	Boilers.
Parker Metal Decorating Co.	Baltimore, Md.	Metal goods.
Paul Revere Manufacturing Co.	do.	Wash suits.
Pierce Lithographic Corporation	Brooklyn, N. Y.	Lithographing.
Pioneer Instrument Co. (Inc.)	do.	Aircraft instruments.
Portland Rubber Co.	Portland, Oreg.	Rubber products.
Queens Products Co.	Brooklyn, N. Y.	Hand bags.
Renton Heel Co.	Lynn, Mass.	Heels.
Rhoades & Ripley Clothing Co.	Boston, Mass.	Clothing.
Rochester Folding Box Co.	Rochester, N. Y.	Boxes and lithographing.
Rochester Manufacturing Co.	do.	Machinery.
Rode & Brand Co.	New York City	Lithographing.
M. H. Rosenberg & Co.	do.	Underwear.
M. H. Rosenmond & Co.	do.	Clothing.
Sackett & Wilhelms Corporation	Brooklyn, N. Y.	Lithographing.
Sale Lithograph Co.	Buffalo, N. Y.	Do.
Schmidt & Ault Paper Co.	York, Pa.	Paper board.
Seabright Woven Felt Co.	Camden, Me.	Felts.
Seiter & Kappes Lithograph Co.	New York City	Lithographing.
Shirek & Hirsch Co.	do.	Clothing.
Snyder & Black Co.	do.	Lithographing.
A. G. Spaulding & Bros.	Chicopee, Mass.	Sporting goods.
Stecher Lithographing Co.	Rochester, N. Y.	Lithographing.
J. Stevens Arms Co.	Chicopee Falls, Mass.	Guns and rifles.
Strauss & Buegeleisen Co.	Brooklyn, N. Y.	Goggles.
Sweet Orr & Co. (Inc.)	New York City	Clothing.
Trautman Bailey & Blampay Co.	do.	Lithographing.
Trimont Manufacturing Co. (Inc.)	Roxbury, Mass.	Tools.
Tucker Lithograph Co. (Inc.)	Long Island City, N. Y.	Lithographing.
Unit Laundry Co.	Newark, N. J.	Laundry.
U. S. Printing and Lithograph Co.	Brooklyn, N. Y.	Printing.
David Well Sons Litho Co.	do.	Lithographing.
Whitehouse Leather Products Co. (Inc.)	New York City	Bags and leather products.
J. Wise & Co. (Inc.)	do.	Dresses.
J. R. Wood & Sons	Brooklyn, N. Y.	Jewelry.
Wright Aeronautical Corporation	Paterson, N. J.	Aero engines.
Wm. Wrigley, Jr.	Chicago, Ill.	Chewing gum.
Zabel Bros. Co.	Philadelphia, Pa.	Printers and lithographers.

Estimates of National and Per Capita Income in 1928

IN CONTINUATION of its earlier work along the same lines, the National Bureau of Economic Research (Inc.) has recently published its estimates of national and per capita incomes in the United States for the year 1928.¹

¹National Bureau of Economic Research (Inc.). News-Bulletin, New York, Dec. 16, 1929.

National Income

For the year 1928 the National Bureau of Economic Research estimates the total realized income of the United States as \$89,419,000,000, made up of the following items:

Wages.....	\$32, 235, 000, 000
Salaries.....	17, 823, 000, 000
Pensions and compensation to employed persons.....	1, 065, 000, 000
Share of entrepreneurs.....	38, 296, 000, 000

The increase in the total national income from 1922 to 1928, as estimated by the research bureau, is shown in the following figures:

1922.....	\$65, 925, 000, 000
1923.....	74, 337, 000, 000
1924.....	77, 135, 000, 000
1925.....	81, 931, 000, 000
1926.....	85, 548, 000, 000
1927.....	88, 205, 000, 000
1928.....	89, 419, 000, 000

Commenting on the total of realized income, the report draws attention to the fact that the figures do not include any allowance for the income which might be imputed to housewives and householders for services rendered to their own families, nor the value of goods and services received by employees in the form of expense accounts, nor money earned through odd-job employment. It is pointed out that the first two classes of items are so great in value that, were they included, the total figures might be largely increased. Further, it is stated that the total of realized income does not include any income arising from changes in the value of property.

Per Capita Incomes

THE following table shows the per capita incomes of salaried workers and of wage earners for the years 1909 to 1927, as given in the report:

Year	Salaried employee	Wage worker	Year	Salaried employee	Wage worker
1909.....	\$976	\$527	1919.....	\$1, 453	\$1, 029
1910.....	1, 002	552	1920.....	1, 740	1, 273
1911.....	1, 022	540	1921.....	1, 696	983
1912.....	1, 045	568	1922.....	1, 715	1, 012
1913.....	1, 066	594	1923.....	1, 831	1, 150
1914.....	1, 088	552	1924.....	1, 896	1, 134
1915.....	1, 096	582	1925.....	1, 950	1, 176
1916.....	1, 148	679	1926.....	2, 025	1, 217
1917.....	1, 204	771	1927.....	2, 084	1, 205
1918.....	1, 265	940			

Wages and Hours of Labor in European Coal Mines, 1927

THE International Labor Office has recently published the results of an inquiry into wages and hours of labor in 1927 in the coal mines of Belgium, Czechoslovakia, France, Germany, Great Britain, Netherlands, Poland, and the Saar.¹ These countries are reported to have supplied over 93 per cent of the European coal production in 1927.

Wages

THE method of determining the wages received is discussed in the following paragraph of the report:

The method adopted for determining the wages of coal-mining workers is based on the total wages bill of the industry. Information is not obtained, as is frequently the case in other industries, as to the average earnings of particular categories of workers. If, in addition to the aggregate wages bill, information is also available as to the number of workers, the number of shifts worked, and the number of tons of coal produced, then it is possible by division to obtain average earnings per worker and per shift, and average wages cost per ton of coal. The only subdivision of the data by categories of workers which has been found possible is that into surface workers and underground workers.

In addition to money wages, the workers also frequently receive payments in kind, such as coal free or at reduced prices, and housing accommodations or payments in lieu thereof. These are given in all the European coal-producing countries. In most countries, also, payments for holidays are made, and "family allowances" are granted to married workers. All of these items, therefore, have been included in the total wages bill.

Social-insurance contributions made by employers are regarded by the International Labor Office as a part of the labor cost, and the advantages derived by the workers from these contributions are considered as supplementary to the wages paid. Where the contributions are payable by the workers they are, of course, a part of wages. The office has, therefore, given in each of its wage calculations two sets of figures, one based on all items including employers' social-insurance contributions and another based on all items excluding these contributions. According to the report, "employers' contributions to social-insurance are high in those countries in which workers' contributions are high, as most schemes are based on joint contributions. The level of employers' contributions is much higher, however, than that of workers' contributions, largely owing to accident-insurance contributions, which are generally a charge on the employer only." It is stated that it is "impracticable to take into consideration the contributions made by the State or local bodies (for which statistics do not usually exist)."

As far as possible, the data obtained related to wage earners only, the supervising and salaried staff being excluded wherever practicable. In Great Britain certain categories of workers ("deputies" and others) covered by wage agreements are included, but it is stated that their influence on the general average of wages is negligible and that the figures may be taken as comparable with those of other countries.

The relative importance of the different elements entering into the total wages bill is shown in Table 1, reproduced from the report. The

¹International Labor Review, Geneva, October, 1929, pp. 539-562; December, 1929, pp. 840-855.

report states that data on employers' contributions to social insurance were not available for the Ruhr and Upper Silesia in Germany. The figures for Belgium relate to about 84 per cent of the output and for Great Britain, to about 96 per cent. The three German districts represented yielded about 93 per cent of the total output of the country.

TABLE 1.—RELATIVE IMPORTANCE OF DIFFERENT ELEMENTS COMPRISING THE TOTAL WAGES BILL IN EUROPEAN COAL MINES, 1927

Country and district	Workmen's insurance contributions	Allowances in cash	Free and cheap coal	Other allowances in kind	Payment for holidays	Employers' insurance contributions	All items other than money wages	Net money wages
(a) Total earnings excluding employers' insurance contributions=100								
Great Britain.....	2.5	-----	2.7	1.4	-----	-----	6.6	93.4
Belgium.....	1.9	1.2	4.5	.2	-----	-----	7.8	92.2
Netherlands.....	5.9	4.3	.9	1.8	1.5	-----	14.4	85.6
France.....	4.8	3.1	2.7	8.8	-----	-----	19.4	80.6
Czechoslovakia.....	6.9	3.2	6.7	1.4	2.4	-----	20.6	79.4
Saar.....	8.3	7.3	3.5	.1	1.8	-----	21.0	79.0
Germany:								
Upper Silesia.....	14.3	2.7	2.6	-----	2.0	-----	21.6	78.4
Ruhr.....	15.1	3.2	1.3	-----	2.9	-----	22.5	77.5
Saxony.....	15.5	1.4	3.1	-----	2.7	-----	22.7	77.3
Poland:								
Upper Silesia.....	8.2	4.5	4.8	3.2	2.4	-----	23.1	76.9
Whole country.....	7.3	6.1	4.6	3.6	2.6	-----	24.2	75.8
Dombrowa.....	4.7	10.5	4.3	5.4	3.0	-----	27.9	72.1
(b) Total earnings including employers' insurance contributions=100								
Great Britain.....	2.4	-----	2.6	1.3	-----	5.0	11.3	88.7
Belgium.....	1.8	1.1	4.3	.2	-----	4.9	12.3	87.7
Netherlands.....	5.4	3.9	.8	1.6	1.4	-----	8.8	78.1
France.....	4.5	2.9	2.5	8.2	-----	6.6	24.7	75.3
Saar.....	7.6	6.6	3.2	.1	1.7	8.8	28.0	72.0
Czechoslovakia.....	6.2	2.9	6.0	1.3	2.2	10.0	28.6	71.4
Poland:								
Upper Silesia.....	7.3	4.0	4.3	2.9	2.1	10.9	31.5	68.5
Whole country.....	6.5	5.5	4.1	3.3	2.3	10.2	31.9	68.1
Dombrowa.....	4.3	9.7	4.0	5.0	2.8	7.5	33.3	66.7
Germany: Saxony.....	13.3	1.2	2.7	-----	2.3	14.0	33.5	66.5

The cash allowances consisted almost entirely of family allowances for wives and children. "Other allowances in kind" included chiefly housing accommodations. The high figure for France under the latter head was, it is said, the result of building activity in northern France after the war. No payments for holidays are made in Great Britain, France, or Belgium; in countries where such payments are made, according to the report, they generally form about 2 to 3 per cent of the total wages bill.

Table 2 shows the relative levels of average earnings in 1927 of coal-mine workers in the different countries, expressed in a common currency. The earnings were converted into gold francs and the results expressed as index numbers in which the wages paid in Great Britain were taken as the base, or 100.

TABLE 2.—RELATIVE LEVELS OF AVERAGE EARNINGS IN EUROPEAN COAL MINES IN 1927, EXPRESSED IN A COMMON CURRENCY

[Great Britain=100]

Country and district	Excluding employers' insurance contributions			Including employers' insurance contributions		
	Under-ground workers	Surface workers	All workers	Under-ground workers	Surface workers	All workers
(a) Based on earnings per day						
Great Britain.....	100	100	100	100	100	100
Netherlands.....	82	85	82	85	88	84
Germany:						
Ruhr.....	75	86	79			
Saxony.....	68	82	71	75	90	77
Saar ¹	62	72	63	64	77	65
Germany: Upper Silesia.....	57	70	60			
France.....	54	56	54	55	57	54
Czechoslovakia.....	51	59	54	55	62	56
Belgium.....	48	48	47	48	48	47
Poland:						
Upper Silesia.....	38	46	39	41	49	42
Whole country.....	37	43	38	39	45	40
Dombrowa.....	36	40	35	37	41	36
(b) Based on annual earnings						
Great Britain.....	100	100	100	100	100	100
Netherlands.....	100	89	96	104	92	99
Germany:						
Ruhr.....	88	91	89			
Saxony.....	78	85	79	86	94	87
Saar ¹	70	73	70	72	78	72
Germany: Upper Silesia.....	67	72	68			
France.....	64	59	62	65	60	63
Czechoslovakia.....	56	61	57	59	64	60
Belgium.....	58	53	56	58	53	56
Poland:						
Upper Silesia.....	44	47	44	47	50	47
Whole country.....	43	44	42	45	47	44
Dombrowa.....	41	41	39	42	42	40

¹ Per man shift.

The purchasing power of the coal miners' daily and annual earnings in 1927, based on food only, is indicated in Table 3. The International Labor Office emphasizes that these calculations are only approximate, stating that "the method adopted is by no means fully satisfactory, and it is indeed necessary to make in advance all reservations against any close comparison of the results. The inclusion, were it possible, of other items of expenditure (clothing, rent, etc.) might have an influence on the results." In this table an additional calculation was made excluding from the total earnings both employers' and workers' insurance contributions, as the result of a suggestion that "as the calculations are intended to measure what the miner can buy with his wage, workers' contributions which are not spent by the worker but are deducted from his wage should be excluded."

TABLE 3.—INDEX NUMBERS OF PURCHASING POWER OF COAL MINERS' EARNINGS IN EUROPEAN COUNTRIES, 1927

[Great Britain=100]

Country and district	Total earnings		Total earnings less employers' insurance contributions		Total earnings less employers' and workers' insurance contributions—All workers
	Under-ground workers	All workers	Under-ground workers	All workers	
(a) Based on earnings per day					
Great Britain.....	100	100	100	100	100
Netherlands.....	101	100	98	96	93
Germany: Ruhr.....			73	75	65
Belgium.....	70	68	70	68	68
France: Nord and Pas de Calais.....	66	66	66	65	64
Germany: Saxony.....	67	68	61	62	54
Saar ¹	67	69	65	66	62
Czechoslovakia.....	66	67	62	63	60
Germany: Upper Silesia.....			55	57	50
Poland:					
Upper Silesia.....	53	54	50	50	47
Dombrowa.....	53	51	51	50	49
(b) Based on annual earnings					
Great Britain.....	100	100	100	100	100
Netherlands.....	123	118	118	113	109
Germany: Ruhr.....			85	86	75
Belgium.....	85	81	85	81	82
France: Nord and Pas de Calais.....	81	79	79	78	76
Germany: Saxony.....	77	77	69	70	61
Saar.....	80	80	77	77	73
Czechoslovakia.....	71	72	67	68	65
Germany: Upper Silesia.....			64	65	57
Poland:					
Upper Silesia.....	61	61	57	57	54
Dombrowa.....	60	58	58	56	55

¹ Earnings per shift.

Output

THE average output of salable coal per man-shift, per day, and per year, of underground workers and of all workers combined is shown in Table 4. The report points out that the great differences between these figures are "obviously largely due to differences in natural conditions and to some extent to the length of the working time underground."

TABLE 4.—AVERAGE OUTPUT OF SALABLE COAL IN EUROPEAN COUNTRIES, PER MAN-SHIFT, PER DAY, AND PER YEAR, IN 1927

[In metric tons. Metric ton=2,204.6 pounds]

Country and district	Per man-shift		Per day		Per year	
	Under-ground workers	All workers	Under-ground workers	All workers	Under-ground workers	All workers
Belgium ¹			0. 737	0. 513		143
Czechoslovakia	1. 247	0. 938	1. 274	. 971	311	242
France	. 843	. 603	. 848	. 608	226	163
Germany:						
Ruhr	1. 386	1. 132	1. 419	1. 166	371	308
Upper Silesia	1. 722	1. 335	1. 821	1. 416	476	373
Saxony	. 851	. 634	. 902	. 673	232	175
Great Britain	1. 332	1. 047	1. 397	1. 100	315	255
Netherlands			1. 390	1. 000	380	274
Poland:						
Upper Silesia	1. 845	1. 273	1. 951	1. 366	507	358
Dombrowa	1. 746	. 995	1. 818	1. 053	465	374
Saar	. 969	. 703			259	190

¹ Averages computed from the number of days worked and from the average number of workers calculated for all mines.

Hours of Labor

TABLE 5 gives the working hours of coal miners in the various European countries covered in the study, measured on a uniform basis adopted by the International Labor Office. This table shows the regulation hours of work as fixed by legislation or by collective agreements or arbitration awards, the individual time spent in the mine, and length of time spent at the face minus breaks. In regard to these data, the office states that "if the regulation hours of work, regardless of the various methods of calculation adopted, are compared with the figures obtained by reduction to the international basis used here, fairly substantial divergences will appear which otherwise might easily have escaped notice. Thus, countries that according to the terms of their regulations seem to have very short hours of work may, in fact, have hours much less favorable to the workers when they are measured on the uniform basis adopted for all countries."

The classes of underground workers chosen for the inquiry were those whose occupation is most closely connected with the work of extraction, namely, those working at the face.

The working-day was found to be fixed by legislation at eight hours in all of the countries except the Netherlands, where it had been set at 8½ hours, but only eight hours were actually worked, in accordance with a collective agreement of October 17, 1921.

TABLE 5.—AVERAGE HOURS OF UNDERGROUND WORKERS IN EUROPEAN COAL MINES, 1927

Country and district	Regulation hours of work				Individual time spent in the mine		Length of time spent at face less breaks ¹	
	Day or shift		Week		Day or shift	Week	Day or shift	Week
	Fixed by legislation	Fixed by collective agreements or arbitration awards	Fixed by legislation	Fixed by collective agreements or arbitration awards				
	Hours	H. m.	Hours	Hours	H. m.	H. m.	H. m.	H. m.
Belgium.....	8		48		8 0	48 0	6 20	38 0
Czechoslovakia.....	8	8 0	48	46	7 28	44 48	5 36	33 36
France: ²							4 5 52	35 12
Whole country.....	8				7 47	46 42	6 0	38 30
Nord and Pas de Calais.....	8				7 47	46 42	6 22	38 9
Lorraine.....	8				7 47	46 42	6 35	39 30
Other coal fields.....	8				7 47	46 42	6 28	38 45
Germany:								
Ruhr.....	8	8 0						
Aachen.....	8	7 8 15						
Upper Silesia.....	8	7 8 0						
Lower Silesia.....	8	8 0						
Saxony.....	8	8 0	48					
		7 30			8 0	44 15	6 15	33 45
Great Britain.....	8	to			to	to	to	to
		8 0			8 30	50 0	6 45	40 30
		7 49			8 19	47 28	6 34	37 5
Netherlands.....		8 0		46	8 10	47 0	6 10	35 0
Poland:								
Upper Silesia.....	8	8 0			8 2	48 12	6 18	37 48
Dombrowa and Cracow.....	8		46		8 30	49 0	6 26	36 46
Saar.....	8	7 30	46	45	7 32	45 12	6 17	37 42

¹ Obtained by deducting from the individual time spent in the mine the figure for the average total traveling time and breaks, excluding any other lost time or waiting periods, except in the case of Great Britain where the time deducted was reported to include traveling time, breaks for meals, and other unproductive time underground. "The figure given for Great Britain is therefore not exactly comparable with those given by the other countries, and correction is impossible so long as the length of this 'unproductive time underground' is not stated."

² The hours of work fixed by collective agreement are 46 a week, with a "permanent undertaking on the part of the workers" to work 2 additional hours on Saturday in return for special overtime pay.

³ Average of figures for the different districts; the regulation hours of work are the same for all coal districts.

⁴ Average waiting period of 16 minutes at pit bottom not taken into consideration.

⁵ Figures represent average time spent in mine, and time spent at face less breaks, of hewers in the morning shift.

⁶ Obtained by deducting from individual time spent in mine only traveling time and collective rest period, no account being taken of other time lost.

⁷ Hours were changed during the year; only latest figure is given here.

⁸ 6 hours and 10 minutes worked on Saturday.

⁹ 4 hours and 10 minutes worked on Saturday.

¹⁰ Including a statutory break of 30 minutes. 6 hours and 30 minutes worked on Saturday.

¹¹ 4 hours and 36 minutes worked on Saturday.

¹² Ascent begins 7½ hours after beginning of descent of each worker.

Average Weekly Earnings in New York State Factories, 1916 to 1929

THE following table showing average weekly earnings in New York State factories, by month, from 1916 to 1929, is taken from the January, 1923, number of the Industrial Bulletin, issued by the State industrial commissioner:

AVERAGE WEEKLY EARNINGS IN REPRESENTATIVE NEW YORK STATE FACTORIES

[Includes all employees in both office and shop. The average weekly earnings are obtained by dividing the total weekly pay roll by the total number of employees on the pay roll for the given week. Reports cover the week including the 15th of the month.]

Month	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
January	\$13.53	\$15.28	\$16.81	\$23.03	\$26.52	\$27.61	\$24.43	\$26.21	\$27.81	\$28.30	\$29.05	\$29.52	\$29.21	\$39.71
February	13.77	15.31	17.66	22.07	26.47	26.77	24.17	25.87	27.73	27.96	28.61	29.39	29.16	29.99
March	13.96	15.79	18.71	22.20	27.87	26.97	24.57	26.92	28.16	28.45	29.04	29.78	29.64	30.35
April	14.15	15.50	19.25	22.11	27.80	26.20	24.15	27.00	27.70	27.67	28.85	29.17	28.79	30.07
May	14.24	16.08	19.91	22.23	28.45	25.86	24.59	27.63	27.66	28.07	28.69	29.18	29.19	30.03
June	14.41	16.20	20.44	22.51	28.77	25.71	24.91	27.87	27.21	27.94	28.99	29.17	29.48	30.62
July	14.11	16.17	20.78	23.10	28.49	25.26	24.77	27.54	27.06	27.98	28.81	28.95	29.15	29.80
August	14.44	16.44	21.23	23.85	28.71	25.43	25.10	27.12	27.40	28.16	28.86	29.29	29.38	30.09
September	14.87	16.97	22.31	24.83	28.73	25.07	25.71	27.41	28.05	28.33	29.31	29.57	29.72	30.47
October	14.95	17.33	22.34	24.41	28.93	24.53	25.61	27.72	27.53	28.57	29.35	29.28	29.78	30.08
November	15.16	17.69	21.60	25.37	28.70	24.32	26.04	27.64	27.66	28.67	29.15	28.75	29.62	29.54
December	15.51	17.71	23.18	26.32	28.35	24.91	26.39	27.98	28.25	29.05	29.47	29.57	30.12	29.75
Average	14.43	16.37	20.35	23.50	28.15	25.72	25.04	27.24	27.68	28.26	29.02	29.30	29.44	29.99

Earnings of Office Workers in New York State Factories, 1920 to 1929

OFFICE workers' earnings in representative New York State factories reached a new high point in October, 1929, according to data published in the Industrial Bulletin for November, 1929, issued by the industrial commissioner of that State, summarizing the trend of such earnings during the past 10 years. In October, 1929, the weekly earnings of these workers averaged \$36.94 as compared with \$31.06 in October, 1920, the figures for October of each year, with one exception, having shown an increase over those for the previous October during the 10-year period. The detailed data, as given in the Industrial Bulletin, are reproduced below:

Average weekly earnings for office workers in representative New York State factories reached a new high point of \$36.94 in October. The gain over October, 1928, amounted to almost 60 cents. These conclusions are based upon figures of office forces and pay rolls submitted regularly by firms on the fixed list for the Labor Market analysis. The tabulation is made every October and covers only office help within the manufacturing plant.

The general trend of earnings has been steadily upward, true for the separate industries as well as all combined. October, 1929, marked the high point in all but three of the industries. The only large drop this year occurred in the public utility group, where earnings fell over \$1 from last October, due mainly to one firm.

In the 10 years under consideration, the whole level of pay has been gradually raised but the increase in the various industries has not been the same. The range between the different industries has broadened from \$26.10-\$34 in 1920 to \$29.34-\$42.68 in 1929. It is unwise to make comparisons among the different industries, since the distribution of the higher salaried supervisory and technical staff and the lower paid clerical force varies. The printing and paper goods industry may be pointed out as showing the greatest actual gain since 1920, an industry where a large part of the office consists of other than clerical help.

The question arises over the variation in earnings as to how much the prevailing wage scale in the shops influences office earnings. To a greater degree than in the shops, office work is the same from one industry to another. Do industries which are well known to pay on a low scale in the shop carry this over into the office? What effect does greater organization of shop workers in certain industries have upon salaries of office workers? Unfortunately the firms do not separate office figures into type of work done, so that no conclusions of this kind can be drawn.

A cursory glance at the men's and women's average weekly earnings in factory offices indicates that men earned more than women in any and every industry, roughly twice as much. Several reasons account for this. Firms still discriminate against women. It is not as necessary for women to work, consequently they are less permanent in business, accept lower pay more willingly, and make less preparation to bear responsibility or acquire skill. Office men earned on the average between \$40 and \$60 while women received between \$20 and \$30.

The prevailing wage level for both men and women office workers was higher in New York City than up-State. This has been found true also for shop workers. Every New York City industry paid \$5 a week more on the average for office women than up-State. Some up-State industries showed higher earnings for men than New York City, because of a greater proportion of supervisory and technical workers.

No year-to-year comparison is made of earnings for men and women, since it is not possible to secure this information every year from identical firms. But the movement is upward for both.

Office workers on the whole fare better than shop help. A comparison of average weekly earnings shows that firms pay more for office work. Added to this is the regularity of office employment and consequently fewer changes in pay. A glance over the firms' reports indicates that offices generally work a shorter day than shops.

TABLE 1.—AVERAGE WEEKLY EARNINGS OF OFFICE EMPLOYEES IN REPRESENTATIVE NEW YORK STATE FACTORIES IN OCTOBER OF EACH YEAR, 1920 TO 1929

[The employees represented in this table are those who appear on factory office pay rolls, such as office clerks, stenographers, bookkeepers, accountants, cashiers, stock clerks, office managers, superintendents, etc.]

Industry	Average weekly earnings									
	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
Stone, clay, and glass.....	\$29.33	\$29.65	\$29.95	\$30.35	\$32.65	\$32.78	\$34.06	\$34.40	\$35.10	\$34.70
Metals and machinery.....	31.97	32.83	32.08	33.36	34.63	35.75	36.31	36.88	37.63	37.72
Wood manufactures.....	34.00	33.77	33.62	34.29	35.06	36.94	39.19	39.52	37.22	37.56
Furs, leather, and rubber goods.....	28.69	27.33	28.22	28.92	29.41	28.75	29.64	29.62	29.82	29.34
Chemicals, oils, paints, etc.....	26.10	26.02	26.43	27.83	28.80	29.45	31.10	32.64	33.38	34.07
Printing and paper goods.....	33.58	34.20	34.24	36.41	37.48	38.90	39.91	40.49	41.37	42.68
Textiles.....	26.96	26.54	26.87	28.08	28.83	29.36	29.95	29.85	30.81	30.87
Clothing and millinery.....	29.45	28.52	28.62	29.68	30.29	30.92	31.41	31.45	31.82	33.30
Food and tobacco.....	32.00	32.27	32.19	33.98	34.31	34.86	35.86	35.86	35.03	36.04
Water, light, and power.....	(¹)	(¹)	(¹)	30.38	31.97	32.78	32.53	31.79	31.60	30.77
Total.....	31.06	31.27	31.20	32.56	33.58	34.49	35.38	35.88	36.37	36.94

¹ Separate earnings not computed because of small number of employees.

A comparison of the average weekly earnings of men and of women in factory offices in New York State in October, 1929, is given in Table 2, reproduced from the Industrial Bulletin.

TABLE 2.—AVERAGE WEEKLY EARNINGS OF MEN AND WOMEN IN FACTORY OFFICES IN NEW YORK STATE, OCTOBER, 1929¹

Industry	Men			Women		
	Total State	New York City	Up State	Total State	New York City	Up State
Metals and machinery.....	\$46.84	\$45.86	\$47.03	\$22.42	\$24.89	\$21.82
Wood manufactures.....	52.05	49.00	54.30	24.21	26.33	23.14
Furs, leather, and rubber goods.....	46.80	46.70	46.93	25.07	29.71	20.92
Chemicals, oils, paints, etc.....	47.77	46.06	48.42	22.80	24.05	22.33
Printing and paper goods.....	56.93	59.99	49.39	26.13	27.51	23.79
Textiles.....	43.15	39.58	44.38	23.67	25.16	23.12
Clothing and millinery.....	46.11	46.62	44.21	27.56	30.04	20.41
Food and tobacco.....	44.03	46.32	40.23	26.24	29.21	23.49
Total.....	48.24	50.45	46.94	24.38	27.57	22.25

¹ Tabulation of office men and women not on fixed list basis as in case of Table 1.

Wages in Tennessee, 1928

AVERAGE weekly wages in all Tennessee industries are published in the Sixth Annual Report of the Department of Labor of that State for the calendar year 1928. The tabulation covers over 121,000 employees in 1,936 inspected establishments.

The manufacture of cotton goods and hosiery leads all the other industrial groups in number of employees. Of the 27,509 males and females in such manufacture, 10,849 men and boys over 16 years of age are reported as being paid an average weekly wage of \$18.27 and 16,480 women and girls over 16 years of age, \$13.38. Approximately 17 per cent of the 78,465 men and boys over 16 years of age, included in the investigation, have an average weekly wage of \$25 or more, and some of these a wage of over \$30. Thus, the average in printing, engraving, and lithography was \$30.29; in telephone and telegraph, \$30.35; in the manufacture of machinery, \$31.27; and in wholesale establishments for plumbing and mill supplies, \$33.90; while the average weekly wage for a group of druggists in wholesale establishments was over \$50. Certain other groups of males, however, were receiving considerably under \$18, for instance, in wholesale produce, \$12.85; in the manufacture of pharmaceuticals and drugs, \$15.64; of cigars, tobacco and snuff, \$15.69; and of boots and shoes, \$16.14.

Of the 42,604 women and girls over 16 years of age, about 25 per cent had an average weekly wage of over \$14; in a number of groups the wage was more than \$22. In the following, however, an average weekly wage of less than \$12 was reported: Packing houses, refineries, and canneries, \$9.20; laundries, \$9.47; glove manufacture, \$9.60; office buildings and banks, \$9.68; boot and shoe manufacture, \$9.96; manufacture of food and food products, \$10.22; and 5 and 10 cent stores, \$10.34.

The Tennessee law prohibits women and girls from working more than 10½ hours in any one day or 57 hours in any one week, and 10½ hours in one day are allowed only in order to provide one short workday in the week.

The following table shows the average weekly wages for males and females over 16 years of age in various Tennessee industries in 1928:

AVERAGE WEEKLY WAGES OF EMPLOYEES OVER 16 YEARS OF AGE IN TENNESSEE INDUSTRIES, 1928

Industry	Total number of employees	Number of establishments	Number of employees over 16		Average weekly wages	
			Male	Female	Male	Female
Manufacturing:						
Agricultural implements.....	1,031	17	965	66	\$22.70	\$14.54
Aluminum.....	90	4	91	8	20.79	20.13
Bags, cloth, and paper.....	897	7	364	533	20.82	12.24
Bakery products.....	1,651	54	1,120	531	24.17	14.44
Bollers and tanks.....	1,067	3	1,063	14	22.57	24.64
Boots and shoes.....	1,356	4	794	562	16.14	9.96
Bottlers.....	750	55	702	47	21.12	14.62
Boxes, paper, and wood.....	1,666	23	1,152	514	17.37	11.51
Brick, lime, cement, and sewer pipe.....	1,394	24	1,314	80	18.29	13.14
Brooms, brushes, and mops.....	32	2	29	3	18.07	26.00
Candy.....	676	11	341	335	24.42	13.08

AVERAGE WEEKLY WAGES OF EMPLOYEES OVER 16 YEARS OF AGE IN TENNESSEE INDUSTRIES, 1928—Continued.

Industry	Total number of employees	Number of establishments	Number of employees over 16		Average weekly wages	
			Male	Female	Male	Female
Manufacturing—Continued.						
Chemicals and fertilizer	1, 148	13	1, 058	90	\$17.68	\$21.86
Chewing gum	57	3	18	34	26.58	11.10
Cigars, tobacco, and snuff	3, 398	19	893	2, 462	15.69	12.89
Clothing	568	6	106	461	20.32	12.32
Cotton goods and hosiery	27, 509	141	10, 849	16, 480	18.27	13.38
Cottonseed-oil products	1, 842	15	1, 802	40	17.70	15.35
Cotton gins and compress	344	30	325	19	19.43	16.21
Dyes	15	1	8	7	25.50	15.86
Electrical	144	10	139	5	29.73	28.00
Feed	523	19	475	48	21.41	21.08
Food and food products	2, 087	88	1, 429	658	21.05	10.22
Foundry products	4, 346	51	4, 268	78	22.07	30.75
Furnaces	229	1	223	3	17.50	30.00
Furniture	2, 417	29	2, 173	241	19.34	15.00
Gas, coal, and electrical products	360	7	339	21	22.23	22.71
Gas and electrical fixtures	275	2	257	18	31.90	27.61
Glass and bottles	714	10	639	75	26.47	22.07
Gloves	18	1	3	15	15.00	9.60
Hardware and stoves	99	1	93	6	20.00	22.68
Harness, saddlery, and leather goods	167	9	134	33	20.60	12.15
Ice	738	42	726	12	23.57	18.33
Ice cream	204	21	177	27	24.38	16.22
Lumber	4, 702	113	4, 561	141	19.31	17.02
Lumber products	8, 580	152	7, 853	719	18.00	14.17
Machinery	754	38	723	31	31.27	19.06
Metal and metal products	779	26	671	108	19.88	15.45
Mines	109	2	107	2	37.95	20.00
Oil (refineries)	106	3	71	35	19.62	20.07
Paints and varnishes	145	10	126	19	21.88	17.54
Paper, pulp, and fiber	327	6	253	73	23.07	14.47
Pharmaceuticals and drugs	477	9	204	273	15.64	14.04
Pottery	76	1	62	14	21.84	13.14
Printing, engraving, and lithographing	2, 761	83	1, 888	869	30.29	18.72
Quarries, stone, and marble	172	10	167	5	31.03	19.60
Roofing	306	7	292	14	24.18	20.50
Silk and silk hosiery	7, 025	12	4, 412	2, 610	22.24	13.22
Steel construction and bridge building	241	1	241		19.40	
Tanneries and extracts	552	10	504	48	18.75	11.75
Telephone and telegraph	1, 434	39	279	1, 155	30.35	16.56
Tinware	46	3	38	8	20.00	13.00
Trunks, valises, and bags	72	3	69	3	21.30	18.00
Water, light, and power	484	26	445	23	21.18	18.09
Woolen mills and woolen extracts	1, 869	7	1, 015	853	16.84	13.06
Miscellaneous	2, 610	24	2, 440	169	19.41	14.48
Retail establishments:						
Boots and shoes	14	2	5	9	23.40	19.89
Clothing	516	25	130	386	25.80	19.30
Coal and ice	398	22	385	13	20.40	18.77
Confectioners, soft drinks	62	1	61	1	23.85	32.00
Department stores	6, 761	63	2, 575	4, 177	23.86	18.85
Druggists	175	4	101	74	26.23	13.00
5 and 10 cent stores	585	12	70	511	19.52	10.34
Groceries and markets	39	1	28	11	17.60	15.00
Hardware	34	2	26	8	32.15	22.75
Jewelry	7	1	6		19.29	
Lumber	261	12	251	10	22.43	21.80
Millinery	13	3	1	12	13.00	12.83
Stationery, books, news	45	1	24	21	41.08	21.00
Miscellaneous	222	7	83	139	30.12	15.20
Wholesale establishments:						
Clothing	240	2	36	204	16.00	11.40
Druggists	47	1	8	39	51.75	16.41
Grain, feed, and seeds	15	1	14	1	21.35	10.00
Groceries and fruits	181	2	101	80	26.26	22.61
Hardware, stoves, iron and steel	122	2	99	23	22.66	22.61
Lumber products	311	9	300	11	18.49	24.55
Paints and varnishes	49	1	37	12	23.65	19.41
Plumbing and mill supplies	208	9	185	23	33.90	47.21
Produce	259	2	151	108	12.85	4.76
Unclassified	16	1	11	5	18.18	14.50
Shops:						
Blacksmiths	7	1	7		25.57	
Carpenters	5	1	5		30.00	
Cleaning and dyeing	132	14	81	51	20.06	16.37
Machine	178	5	173	5	28.59	23.60
Stationery, enameling, and stamping	6	1	6		39.09	

1 As given in report—undoubtedly an error.

AVERAGE WEEKLY WAGES OF EMPLOYEES OVER 16 YEARS OF AGE IN TENNESSEE INDUSTRIES, 1928—Continued

Industry	Total number of employees	Number of establishments	Number of employees over 16		Average weekly wages	
			Male	Female	Male	Female
Shops—Continued.						
Street railway car.....	1,046	1	970	74	\$25.14	\$19.62
Upholsteries.....	9	1	9		23.11	
Unclassified.....	41	2	40	1	25.40	24.00
Not otherwise specified:						
Auto sales and garage.....	1,534	85	1,397	136	27.99	20.63
Builders' supplies.....	248	15	238	10	22.00	20.40
Contractors.....	341	6	331	10	28.01	24.80
Dairies (creameries).....	702	31	625	76	20.74	15.96
Express, transfer, and storage.....	412	5	278	134	32.47	28.00
Filling stations.....	35	4	35		27.86	
Hotels and restaurants.....	1,522	36	869	653	15.90	10.93
Laundries.....	5,218	125	1,602	3,616	23.85	9.47
Newspaper, periodicals.....	443	4	385	58	34.10	20.85
Office buildings and banks.....	201	9	105	96	19.58	9.68
Packing houses, refineries, and canneries.....	1,894	30	1,138	708	21.89	9.20
Picture shows, theaters.....	500	44	370	130	32.57	13.63
Railroad transportation.....	4,584	15	4,476	99	26.84	21.86
Unclassified.....	325	7	154	171	32.32	11.05
Total.....	121,411	1,936	78,465	42,604		

Very few minors under 16 years of age are reported as employed in the 1,936 inspected establishments, only 342 such children out of 121,411 employees. The only industrial groups in which more than 10 of these minors are included are water, light, and power with 16; cigars, tobacco, and snuff with 43; packing houses, refineries, and canneries with 48; and cotton goods and hosiery with 180.

Salaries of Recent Entrants into Japanese Government Professional Services

THE monthly salaries of Japanese graduates in various professions who have recently entered the Government service are given below, as are also the salaries of Japanese graduates who have entered private employment. The tabulation is based on figures taken from the Trans-Pacific (Tokyo) of October 17, 1929.

MONTHLY SALARIES OF GRADUATES WHO ENTERED THE JAPANESE GOVERNMENT SERVICE OR PRIVATE EMPLOYMENT

[Conversions into U. S. currency on basis of one yen in October, 1929=47.8 cents]

Profession and class of employment	Monthly salary				Profession and class of employment	Monthly salary			
	High		Low			High		Low	
	Yen	U. S. currency	Yen	U. S. currency		Yen	U. S. currency	Yen	U. S. currency
Law:					Engineering:				
Government.....	133	\$63.57	60	\$28.68	Government.....	130	\$62.14	80	\$38.24
Private.....	85	40.63	33	15.77	Private.....	84	40.15	67	32.03
Economics:					Science: Government	100	47.80	85	40.63
Government.....	120	57.36	50	23.90	Agriculture:				
Private.....	75	35.85	45	21.51	Government.....	100	47.80	70	33.46
Literature:					Private.....	75	35.85	50	23.90
Government.....	135	64.53	62	29.64	Medical: Govern-				
Private.....	120	57.36	35	16.73	ment.....	200	95.60	50	23.90

TREND OF EMPLOYMENT

Summary for December, 1929

EMPLOYMENT decreased 2.0 per cent in December, 1929, as compared with November, and pay-roll totals decreased 0.8 per cent, according to reports made to the Bureau of Labor Statistics.

The industrial groups surveyed, the number of establishments reporting in each group, the number of employees covered, and the total pay rolls for one week, for both November and December, together with the per cent of change in December, are shown in the following summary:

SUMMARY OF EMPLOYMENT AND PAY-ROLL TOTALS, DECEMBER AND NOVEMBER, 1929

Industrial group	Estab- lish- ments	Employment		Percent of change	Pay roll in one week		Percent of change
		Novem- ber, 1929	December, 1929		November, 1929	December, 1929	
1. Manufacturing.....	12, 947	3, 385, 404	3, 265, 373	-3.1	\$30, 071, 141	\$28, 716, 833	-3.3
2. Coal mining.....	1, 878	325, 294	329, 590	+1.3	8, 938, 925	10, 330, 850	+15.6
Anthracite.....	162	117, 906	121, 391	+2.9	3, 506, 875	4, 785, 556	+36.5
Bituminous.....	1, 216	207, 210	208, 199	+0.5	5, 432, 050	5, 545, 294	+2.1
3. Metalliferous mining.....	346	62, 794	59, 554	-4.4	1, 859, 651	1, 814, 377	-2.4
4. Quarrying and nonme- talic mining.....	655	36, 815	33, 600	-8.6	940, 507	836, 195	-11.1
5. Public utilities.....	9, 463	730, 184	713, 110	-1.0	21, 105, 998	21, 514, 436	+1.9
6. Trade.....	8, 193	311, 528	357, 225	+14.7	7, 712, 387	8, 622, 630	+11.8
Wholesale.....	1, 778	60, 521	60, 275	-0.4	1, 830, 509	1, 882, 171	+2.8
Retail.....	6, 324	251, 007	296, 950	+18.3	5, 881, 878	6, 740, 459	+14.6
7. Hotels.....	1, 784	149, 452	146, 041	-2.3	2, 574, 248	2, 500, 296	-0.9
8. Canning and preserving.....	457	36, 490	23, 537	-35.5	636, 360	440, 271	-30.8
Total.....	34, 433	5, 027, 373	4, 928, 000	-2.0	133, 789, 307	132, 775, 908	-0.8

RECAPITULATION BY GEOGRAPHIC DIVISIONS

GEOGRAPHIC DIVISION							
New England ¹	2, 206	461, 405	450, 830	-2.3	\$11, 426, 923	\$11, 275, 509	-1.3
Middle Atlantic ²	5, 967	1, 450, 620	1, 434, 065	-1.8	41, 584, 260	42, 384, 236	+1.9
East North Central ³	8, 164	1, 483, 842	1, 445, 067	-2.6	42, 529, 722	40, 915, 708	-3.8
West North Central ⁴	3, 972	319, 430	314, 947	-1.4	7, 966, 367	7, 972, 152	+0.1
South Atlantic ⁵	4, 168	500, 338	495, 432	-1.0	10, 629, 268	10, 562, 969	-0.6
East South Central ⁶	2, 063	212, 586	207, 812	-2.2	4, 174, 297	4, 166, 326	-0.2
West South Central ⁷	2, 310	191, 727	185, 700	-3.1	4, 445, 016	4, 387, 459	-1.3
Mountain ⁸	1, 298	107, 163	105, 738	-1.3	3, 192, 935	3, 218, 498	+0.8
Pacific ⁹	4, 224	291, 262	288, 509	-0.9	7, 840, 510	7, 893, 051	+0.7
All divisions.....	34, 433	5, 027, 373	4, 928, 000	-2.0	133, 789, 307	132, 775, 908	-0.8

¹ Weighted per cent of change for the combined 54 manufacturing industries repeated from Table 2, p. 178; the remaining per cents of change, including total, are unweighted.

² Cash payments only; see text, p. 203.

³ Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont.

⁴ New Jersey, New York, Pennsylvania.

⁵ Illinois, Indiana, Michigan, Ohio, Wisconsin.

⁶ Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota.

⁷ Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia.

⁸ Alabama, Kentucky, Mississippi, Tennessee.

⁹ Arkansas, Louisiana, Oklahoma, Texas.

¹⁰ Arizona, Colorado, Idaho, Montana, New Mexico, Nevada, Utah, Wyoming.

¹¹ California, Oregon, Washington.

The usual seasonal activity in retail trade in December caused a substantial gain in employment over November, and anthracite and bituminous coal mining also showed an increase in number of workers. The remaining industrial groups reported decreased employment in December. The decrease in employment was reflected in each geographic division, the smallest decline (0.9 per cent) occurring in the Pacific division and the greatest decrease (3.1 per cent) in the West South Central States.

For convenient reference the latest data available relating to all employees, excluding executives and officials, on Class I railroads, drawn from Interstate Commerce Commission reports, are shown in the following statement. These reports are for the months of October and November instead of for November and December, consequently the figures can not be combined with those presented in the foregoing table.

EMPLOYMENT AND PAY-ROLL TOTALS, CLASS I RAILROADS

Industry	Employment		Per cent of change	Amount of pay roll in entire month		Per cent of change
	Oct. 15, 1929	Nov. 15, 1929		October, 1929	November, 1929	
Class I railroads.....	1,732,858	1,664,023	-4.0	\$255,617,115	\$232,741,267	-8.9

The total number of employees included in this summary is 6,592,-000 whose combined earnings in one week amounted to more than \$187,000,000.

1. Employment in Selected Manufacturing Industries in December, 1929

Comparison of Employment and Pay-Roll Totals in Manufacturing Industries, November and December, 1929

EMPLOYMENT in manufacturing industries decreased 3.1 per cent in December as compared with November and pay-roll totals decreased 3.3 per cent.

The Bureau of Labor Statistics' weighted index of employment in manufacturing industries for December, 1929, is 91.9, as compared with 94.8 for November, 1929, and 95.5 for December, 1928; the weighted index for pay-roll totals is 92.0 for December, 1929, as compared with 95.1 for November, 1929, and 97.7 for December, 1928. The monthly average, 1926, equals 100.

The average index of employment for the 12 months ending December, 1929, for all industries combined was 97.5, which was 3.9 per cent above the index for the year 1928 (93.8) and 1.1 per cent higher than the index of employment for the year 1927 (96.4). The average index of employees' earnings for the 12 months of 1929 was 100.4. The index was 6.2 per cent higher than the average index for the year 1928 (94.5) and 4.0 per cent above the level of the year 1927 (96.5).

The paper group of industries showed a small increase in employment, while the remaining 11 groups showed decreased employment. The iron and steel group reported a drop of 3.5 per cent, each

industry in this group showing a loss in employees, as did each industry in the lumber, leather, chemicals, vehicle, and nonferrous metal groups of industries. The iron and steel industry decreased 5.2 per cent and foundries declined 1.8 per cent in employment. Of the 10 industries comprising the textile group, decreases in number of employees occurred in all but one industry, millinery, which registered a small increase. The hosiery and woolen goods industries decreased over 4 per cent and cotton goods decreased 1.9 per cent in employment. The slaughtering industry with a substantial increase of 3.1 per cent in December was the only industry of the food group showing improved employment conditions over the previous month.

The rayon and radio industries, which are not yet included in the bureau's indexes, both reported losses in number of workers in December, rayon decreasing 1.7 per cent and radio decreasing 49.3 per cent in employment.

The December report is based on data covering 12,185 establishments in 54 of the principal manufacturing industries in the United States. These establishments had in December 3,224,591 employees whose combined earnings in one week were \$85,782,670.

The decrease in employment in manufacturing industries was reflected in each geographic division of the country, decreases of over 4 per cent occurring in 5 of the 9 divisions.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL MANUFACTURING ESTABLISHMENTS IN NOVEMBER AND DECEMBER, 1929, BY INDUSTRIES

Industry	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		November, 1929	December, 1929		November, 1929	December, 1929	
Food and kindred products	1,751	231,169	229,457	(1)	\$5,944,885	\$5,981,434	(1)
Slaughtering and meat packing.....	202	89,418	92,183	+3.1	2,344,248	2,433,513	+3.8
Confectionery.....	268	36,811	35,571	-3.4	681,779	683,998	+0.3
Ice cream.....	285	10,725	10,344	-3.6	359,176	360,319	-2.5
Flour.....	321	15,590	15,343	-1.6	416,329	418,841	+0.6
Baking.....	659	68,016	66,384	-2.4	1,837,167	1,792,001	-2.5
Sugar refining, cane.....	16	10,009	9,832	-7.3	306,186	302,767	-1.1
Textiles and their products	2,057	596,956	582,931	(1)	11,395,461	11,144,323	(1)
Cotton goods.....	461	201,632	197,868	-1.9	3,062,946	3,004,681	-1.9
Hosiery and knit goods.....	318	101,196	96,923	-4.2	2,008,118	1,935,041	-3.6
Silk goods.....	275	63,620	63,223	-0.6	1,287,528	1,283,580	+0.3
Woolen and worsted goods.....	179	57,219	54,680	-4.4	1,237,073	1,188,445	-3.9
Carpets and rugs.....	27	25,235	24,308	-3.7	655,877	583,501	-11.0
Dyeing and finishing textiles.....	113	31,987	31,427	-1.8	753,780	737,344	-2.2
Clothing, men's.....	303	61,834	61,019	-1.3	1,276,237	1,331,844	+4.4
Shirts and collars.....	110	20,882	20,834	-0.2	337,504	329,737	-2.3
Clothing, women's.....	196	22,988	22,256	-3.2	552,902	526,471	-4.8
Millinery and lace goods.....	75	10,363	10,393	+0.3	223,456	228,670	+0.1
Iron and steel and their products	1,869	712,032	684,931	(1)	21,417,397	20,369,697	(1)
Iron and steel.....	202	273,413	259,107	-5.2	8,395,191	7,744,762	-7.7
Cast-iron pipe.....	39	11,238	10,702	-4.8	259,214	248,708	-4.0
Structural ironwork.....	168	31,062	30,192	-2.8	945,374	925,093	-2.1
Foundry and machine-shop products.....	1,025	271,177	266,214	-1.8	8,203,790	8,022,282	-2.2
Hardware.....	69	31,300	30,785	-1.6	800,033	802,968	-0.7
Machine tools.....	149	41,425	39,109	-5.6	1,320,304	1,260,035	-4.6
Steam fittings and steam and hot-water heating apparatus.....	106	32,127	30,264	-5.8	914,801	832,756	-9.0
Stoves.....	111	20,290	18,558	-8.5	560,590	533,113	-6.4

¹ The per cent of change has not been computed for the reason that the figures in the preceding columns are unweighted and refer only to the establishments reporting, for the weighted per cent of change, wherein proper allowance is made for the relative importance of the several industries, so that the figures may represent all establishments of the country in the industries here represented, see Table 2.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL MANUFACTURING ESTABLISHMENTS IN NOVEMBER AND DECEMBER, 1929, BY INDUSTRIES—Continued

Industry	Estab- lish- ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		Novem- ber, 1929	Decem- ber, 1929		November, 1929	December, 1929	
Lumber and its products	1,354	239,179	225,187	(¹)	\$5,285,890	\$4,916,197	(¹)
Lumber, sawmills.....	628	141,020	134,256	-4.8	2,932,491	2,800,379	-4.5
Lumber, millwork.....	318	31,160	29,438	-5.5	712,021	675,456	-5.1
Furniture.....	408	66,990	61,493	-8.2	1,641,366	1,434,272	-12.6
Leather and its products	423	135,337	128,975	(¹)	2,738,967	2,747,650	(¹)
Leather.....	126	26,634	26,101	-2.0	676,550	665,857	-1.6
Boots and shoes.....	297	108,703	102,874	-5.4	2,061,817	2,081,793	+1.0
Paper and printing	1,209	215,928	216,465	(¹)	7,321,627	7,385,290	(¹)
Paper and pulp.....	203	57,933	57,659	-0.5	1,599,319	1,596,921	-0.2
Paper boxes.....	177	20,498	19,673	-4.0	476,238	452,039	-5.1
Printing, book and job.....	379	50,459	51,460	+2.0	1,714,028	1,764,457	+2.9
Printing, newspapers.....	450	87,038	87,613	+0.7	3,532,042	3,571,873	+1.1
Chemicals and allied products	381	107,871	105,441	(¹)	3,213,615	3,171,409	(¹)
Chemicals.....	133	35,233	34,870	-1.0	991,077	977,468	-1.4
Fertilizers.....	173	10,663	10,027	-6.0	199,138	193,436	-2.9
Petroleum refining.....	75	61,975	60,544	-2.3	2,023,400	2,000,505	-1.1
Stone, clay, and glass products	955	124,639	115,653	(¹)	3,213,425	2,991,563	(¹)
Cement.....	103	20,118	18,702	-7.0	580,064	547,000	-5.7
Brick, tile, and terra cotta.....	608	37,537	33,510	-10.7	908,147	803,684	-11.5
Pottery.....	112	19,865	19,890	+0.1	491,194	488,761	-0.5
Glass.....	132	47,119	43,551	-7.6	1,234,000	1,152,058	-6.6
Metal products, other than iron and steel	228	52,801	50,010	(¹)	1,327,028	1,270,046	(¹)
Stamped and enameled ware.....	75	18,985	17,355	-8.6	419,030	388,531	-7.3
Brass, bronze, and copper products.....	153	33,816	32,655	-3.4	907,998	881,515	-2.9
Tobacco products	235	65,468	61,193	(¹)	1,103,935	1,047,835	(¹)
Chewing and smoking tobacco and snuff.....	26	8,438	9,051	+7.3	131,101	144,682	+10.4
Cigars and cigarettes.....	209	57,030	52,142	-8.6	972,834	903,153	-7.2
Vehicles for land transportation	1,245	490,411	472,789	(¹)	15,474,211	14,293,765	(¹)
Automobiles.....	209	318,804	302,445	-5.1	9,999,904	8,648,868	-13.5
Carriages and wagons.....	47	1,258	1,098	-12.7	28,277	23,677	-16.3
Car building and repairing, electric-railroad.....	435	29,008	28,375	-2.2	904,432	916,873	+1.4
Car building and repairing, steam-railroad.....	554	141,341	140,871	-0.3	4,541,598	4,614,347	+1.6
Miscellaneous industries	540	413,622	392,261	(¹)	11,635,390	11,493,004	(¹)
Agricultural implements.....	82	28,331	29,153	+2.9	813,680	873,973	+7.4
Electrical machinery, appa- ratus and supplies.....	197	223,792	215,571	-3.7	6,700,862	6,666,652	-0.5
Pianos and organs.....	69	7,612	6,505	-14.5	235,036	196,006	-16.6
Rubber boots and shoes.....	13	18,133	18,351	+1.2	448,459	456,859	+1.9
Automobile tires.....	36	42,987	41,527	-3.4	1,157,515	1,133,140	-2.1
Shipbuilding.....	81	38,680	40,312	+4.2	1,164,148	1,232,811	+5.9
Rayon ²	18	28,036	27,565	-1.7	614,895	584,832	-4.9
Radio ³	44	20,051	13,217	-49.3	500,786	349,331	-30.2
All industries	12,247	3,385,404	3,265,373	(¹)	90,071,141	86,716,835	(¹)

¹ The per cent of change has not been computed for the reason that the figures in the preceding column are unweighted and refer only to the establishments reporting, for the weighted per cent of change, wherein proper allowance is made for the relative importance of the several industries, so that the figures may represent all establishments of the country in the industries here represented, see Table 2.

² The rayon industry was surveyed for the first time for the January-February comparison, and the radio industry for the March-April comparison, and, since the data for computing relative numbers are not yet available, these industries are not included in the bureau's indexes of employment and pay-roll totals. The total figures for all manufacturing industries given in the text, p. 176, do not include rayon or radio.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL MANUFACTURING ESTABLISHMENTS IN NOVEMBER AND DECEMBER, 1929, BY INDUSTRIES—Continued**RECAPITULATION BY GEOGRAPHIC DIVISIONS**

Industry	Estab- lish- ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		Novem- ber, 1929	Decem- ber, 1929		November, 1929	December, 1929	
GEOGRAPHIC DIVISION ¹							
New England.....	1, 425	386, 060	374, 945	-2.9	\$9, 312, 084	\$9, 141, 808	-1.8
Middle Atlantic.....	2, 828	946, 908	917, 675	-3.1	27, 182, 642	26, 493, 206	-2.5
East North Central.....	3, 094	1, 105, 678	1, 057, 875	-4.3	32, 196, 613	30, 223, 047	-6.1
West North Central.....	1, 075	178, 125	172, 232	-3.3	4, 469, 406	4, 331, 482	-3.1
South Atlantic.....	1, 563	349, 983	341, 893	-2.3	6, 924, 808	6, 794, 936	-1.9
East South Central.....	581	129, 290	123, 941	-4.1	2, 425, 940	2, 358, 181	-2.8
West South Central.....	702	117, 916	112, 567	-4.5	2, 758, 286	2, 687, 110	-2.6
Mountain.....	220	33, 745	32, 318	-4.2	943, 392	931, 004	-1.3
Pacific.....	759	137, 699	131, 927	-4.2	3, 857, 970	3, 756, 059	-2.6
All divisions.....	12, 247	3, 365, 494	3, 265, 373	(1)	96, 071, 141	96, 716, 833	(1)

¹ The per cent of change has not been computed for the reason that the figures in the preceding columns are unweighted and refer only to the establishments reporting, for the weighted per cent of change, wherein proper allowance is made for the relative importance of the several industries, so that the figures may represent all establishments of the country in the industries here represented, see Table 2.

² See footnotes 3 to 11, p. 174.

TABLE 2.—PER CENT OF CHANGE, NOVEMBER TO DECEMBER, 1929—12 GROUPS OF MANUFACTURING INDUSTRIES AND TOTAL OF ALL INDUSTRIES

[Computed from the index numbers of each group, which are obtained by weighting the index numbers of the several industries of the group, by the number of employees, or wages paid, in the industries]

Group	Per cent of change, November to December		Group	Per cent of change, November to December	
	Number on pay roll	Amount of pay roll		Number on pay roll	Amount of pay roll
Food and kindred products.....	-1.1	+0.1	Stone, clay, and glass products.....	-7.4	-7.2
Textiles and their products.....	-2.4	-2.1	Metal products, other than iron and steel.....	-5.0	-4.1
Iron and steel and their products.....	-3.5	-4.6	Tobacco products.....	-6.9	-5.6
Lumber and its products.....	-5.9	-7.1	Vehicles for land transportation.....	-2.6	-5.3
Leather and its products.....	-4.7	+0.4	Miscellaneous industries.....	-2.5	+0.2
Paper and printing.....	+0.1	+0.8			
Chemicals and allied products.....	-2.1	-1.3	All industries.....	-3.1	-3.3

Comparison of Employment and Pay-Roll Totals in Manufacturing Industries in December, 1929, and December, 1928

THE LEVEL of employment in manufacturing industries in December, 1929, was 3.8 per cent lower than in December, 1928, and employees' earnings were 5.8 per cent lower.

Four of the 12 groups and 17 of the 54 separate industries had more employees at the end of this 12-month period than at the beginning, the remaining 8 groups and 37 industries showing decreased employment. The vehicle group of industries showed the greatest loss in employees over the year's interval, due to a decrease of 26 per cent in the automobile industry. Other outstanding decreases in employment in separate industries occurred in pianos (27.4 per cent), automobile tires (23.6 per cent), millwork (14.9 per cent), brick (13.3 per cent), and cement (12.4 per cent). The outstanding increases in employment over this period were 28.0 per cent in ship-building, 15.5 per cent in petroleum refining, and 14.9 per cent in electrical machinery.

Two of the nine geographic divisions showed increased employment in December, 1929, as compared with December, 1928, the West South Central and Middle Atlantic divisions showing gains of 3.5 and 0.2 per cent, respectively.

TABLE 3.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, DECEMBER, 1929, WITH DECEMBER, 1928

[The per cents of change for each of the 12 groups of industries and for the total of all industries are weighted in the same manner as are the per cents of change in Table 2]

Industry	Per cent of change, December, 1929, compared with December, 1928		Industry	Per cent of change, December, 1929, compared with December, 1928	
	Number on pay roll	Amount of pay roll		Number on pay roll	Amount of pay roll
Food and kindred products.	-1.8	-1.5	Paper and printing—Con.		
Slaughtering and meat pack- ing.....	-0.8	-1.7	Printing, book and job.....	+5.2	+5.7
Confectionery.....	-1.4	-0.3	Printing, newspapers.....	+3.2	+4.4
Ice cream.....	-2.0	-0.6	Chemicals and allied prod- ucts.		
Flour.....	-1.3	+1.9	Chemicals.....	+3.9	+6.0
Baking.....	-1.4	(¹)	Fertilizers.....	-0.7	-0.1
Sugar refining, cane.....	-8.6	-8.5	Petroleum refining.....	-9.0	-7.9
Textiles and their products.				+15.5	+16.3
Cotton goods.....	-4.3	-8.8	Stone, clay, and glass prod- ucts.		
Hosiery and knit goods.....	-6.4	-11.9	Cement.....	-8.8	-11.0
Silk goods.....	+3.3	+5.2	Cement.....	-12.4	-9.7
Woolen and worsted goods.....	-1.8	-7.3	Brick, tile, and terra cotta.....	-13.3	-17.5
Carpets and rugs.....	-10.0	-15.6	Pottery.....	-0.8	(¹)
Dyeing and finishing tex- tiles.....	-2.1	-9.2	Glass.....	-2.5	-3.6
Clothing, men's.....	-4.2	-13.9	Metal products, other than iron and steel.		
Shirts and collars.....	-0.4	-8.2	Stamped and enameled ware.....	-10.0	-19.2
Clothing, women's.....	+0.2	-1.1	Brass, bronze, and copper products.....	-8.7	-17.6
Millinery and lace goods.....	-6.9	-9.8		-10.1	-19.2
Iron and steel and their products.			Tobacco products.		
Iron and steel.....	-2.5	-8.2	Chewing and smoking tobacco and snuff.....	-6.7	-5.5
Cast-iron pipe.....	-1.0	-5.4	Cigars and cigarettes.....	+0.6	-0.2
Structural ironwork.....	-5.7	-11.1		-7.6	-6.2
Foundry and machine-shop products.....	-5.0	-6.7	Vehicles for land transpor- tation.		
Hardware.....	-0.3	-1.6	Automobiles.....	-11.5	-12.8
Machine tools.....	+3.1	+1.2	Carriages and wagons.....	-26.0	-35.1
Steam fittings and steam apparatus.....	-5.2	-7.9	Car building and repairing, electric-railroad.....	-13.7	-16.8
Stoves.....	+6.4	-1.3	Car building and repairing, steam-railroad.....	+0.1	+4.1
Lumber and its products.				+3.6	+12.5
Lumber, sawmills.....	+1.6	-3.6	Miscellaneous industries.		
Lumber, millwork.....	-7.2	-8.1	Agricultural implements.....	+8.5	+8.0
Furniture.....	-7.3	-8.0	Electrical machinery, appa- ratus, and supplies.....	-1.9	-3.1
Leather and its products.			Pianos and organs.....	+14.9	+16.1
Leather.....	+3.4	+4.9	Rubber boots and shoes.....	-27.4	-32.6
Boots and shoes.....	+1.1	-4.2	Automobile tires.....	-2.9	-1.3
Paper and printing.			Shipbuilding.....	-23.6	-31.5
Paper and pulp.....	+2.6	+4.1		+28.0	+29.3
Paper boxes.....	+1.5	+1.6	All industries.	-3.8	-5.8
	+2.3	+0.6			

RECAPITULATION BY GEOGRAPHIC DIVISIONS

GEOGRAPHIC DIVISION ¹			GEOGRAPHIC DIVISION ² —con.		
New England.....	-4.8	-8.9	West South Central.....	+3.5	+7.5
Middle Atlantic.....	+0.2	(¹)	Mountain.....	-0.9	+3.6
East North Central.....	-10.0	-15.8	Pacific.....	-2.8	-0.6
West North Central.....	-1.4	-0.2			
South Atlantic.....	-1.8	-1.5	All divisions.	-3.8	-5.8
East South Central.....	-3.5	-6.1			

¹ No change.

² See footnotes 3 to 11, p. 174.

Per Capita Earnings in Manufacturing Industries in December, 1929

PER CAPITA EARNINGS of employees in the combined 54 manufacturing industries was 0.2 per cent lower in December, 1929, than in November, 1929, and 2.2 per cent lower than in December, 1928.

TABLE 4.—COMPARISON OF PER CAPITA EARNINGS IN MANUFACTURING INDUSTRIES, DECEMBER, 1929, WITH NOVEMBER, 1929, AND DECEMBER, 1928

Industry	Per cent of change, December, 1929, compared with—		Industry	Per cent of change, December, 1929, compared with—	
	Novem- ber, 1929	Decem- ber, 1928		Novem- ber, 1929	Decem- ber, 1928
Boots and shoes.....	+6.7	-5.3	Brass, bronze, and copper prod- ucts.....	+0.5	-9.8
Sugar refining, cane.....	+6.7	+0.3	Printing, newspapers.....	+0.5	+1.6
Clothing, men's.....	+5.8	-7.9	Woolen and worsted goods.....	+0.5	-6.3
Agricultural implements.....	+4.4	-1.5	Leather.....	+0.4	+1.3
Confectionery.....	+3.8	+1.3	Lumber, millwork.....	+0.4	-3.2
Car building and repairing, electric-railroad.....	+3.6	+3.8	Lumber, sawmills.....	+0.3	+2.0
Electrical machinery, appara- tus, and supplies.....	+3.3	+1.0	Paper and pulp.....	+0.3	+0.2
Fertilizers.....	+3.3	+1.7	Silk goods.....	+0.3	-5.4
Chewing and smoking tobacco and snuff.....	+2.9	-0.5	Cotton goods.....	(1)	-5.9
Stoves.....	+2.4	-0.9	Baking.....	-0.1	+1.5
Flour.....	+2.2	+3.0	Millinery and lace goods.....	-0.2	-5.7
Car building and repairing, steam-railroad.....	+2.0	+8.6	Chemicals.....	-0.4	+0.4
Shipbuilding.....	+1.6	+0.8	Foundry and machine-shop products.....	-0.4	-2.0
Cement.....	+1.5	+2.9	Dyeing and finishing textiles.....	-0.5	-10.4
Cigars and cigarettes.....	+1.5	+1.5	Pottery.....	-0.6	+0.6
Stamped and enameled ware.....	+1.4	-9.7	Brick, tile, and terra cotta.....	-0.9	-4.8
Automobile tires.....	+1.3	-10.4	Paper boxes.....	-1.1	-1.7
Petroleum refining.....	+1.2	+0.9	Clothing, women's.....	-1.6	-3.1
Ice cream.....	+1.1	+1.5	Shirts and collars.....	-2.1	-1.0
Machine tools.....	+1.1	-6.5	Pianos and organs.....	-2.4	-7.4
Glass.....	+1.0	-1.3	Iron and steel.....	-2.7	-5.4
Hardware.....	+0.9	-3.1	Steam fittings and steam and hot-water heating apparatus.....	-3.3	-5.2
Printing, book and job.....	+0.9	+0.8	Carriages and wagons.....	-4.1	-3.3
Cast-iron pipe.....	+0.8	-1.8	Furniture.....	-4.8	-5.9
Rubber boots and shoes.....	+0.7	+1.6	Carpets and rugs.....	-7.7	-7.2
Slaughtering and meat packing.....	+0.7	-0.7	Automobiles.....	-8.8	-12.4
Structural ironwork.....	+0.7	-1.5			
Hosiery and knit goods.....	+0.6	+1.8	All industries.....	-0.2	-2.2

(1) No change.

Indexes of Employment and Pay-Roll Totals in Manufacturing Industries

INDEX NUMBERS for December, 1928, and October, November, and December, 1929, showing relatively the variation in number of persons employed and in pay-roll totals in each of the 54 manufacturing industries surveyed by the Bureau of Labor Statistics, together with general indexes for the combined 12 groups of industries, appear in Table 5.

TABLE 5.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, DECEMBER, 1928, AND OCTOBER, NOVEMBER, AND DECEMBER, 1929

[Monthly average, 1926=100]

Industry	Employment				Pay-roll totals			
	1928	1929			1928	1929		
	Decem- ber	Octo- ber	Novem- ber	Decem- ber	Decem- ber	Octo- ber	Novem- ber	Decem- ber
General index.....	95.5	96.3	94.8	91.9	97.7	102.3	95.1	92.0
Food and kindred products.....	102.1	104.0	101.4	100.3	104.4	106.0	102.7	102.8
Slaughtering and meat packing.....	105.9	101.4	101.8	105.0	110.3	103.8	104.4	108.4
Confectionery.....	104.0	111.0	106.1	102.5	106.0	112.7	105.4	105.7
Ice cream.....	80.9	90.6	82.3	79.3	82.1	91.2	83.7	81.6
Flour.....	103.1	106.5	103.5	101.8	104.0	112.6	105.4	106.0
Baking.....	101.4	105.2	102.5	100.0	101.7	107.1	104.3	101.7
Sugar refining, cane.....	92.1	96.8	90.8	84.2	97.8	103.0	90.5	89.5

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TABLE 5.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, DECEMBER, 1928, AND OCTOBER, NOVEMBER, AND DECEMBER, 1929—Continued

Industry	Employment				Pay-roll totals			
	1928	1929			1928	1929		
	Decem-ber	Octo-ber	Novem-ber	Decem-ber	Decem-ber	Octo-ber	Novem-ber	Decem-ber
Textiles and their products	97.7	98.2	95.8	93.5	99.5	100.0	92.6	90.7
Cotton goods.....	98.3	94.8	93.8	92.0	99.8	94.2	89.6	87.9
Hosiery and knit goods.....	95.2	103.2	102.6	98.3	101.9	113.7	111.2	107.2
Silk goods.....	97.9	98.1	96.7	96.1	102.7	101.8	95.5	95.2
Woolen and worsted goods.....	99.4	98.5	93.6	89.5	102.2	100.7	89.8	86.3
Carpets and rugs.....	106.5	109.1	108.3	104.3	104.6	108.4	106.7	95.0
Dyeing and finishing textiles.....	103.3	102.4	100.8	99.0	109.7	103.5	96.5	94.4
Clothing, men's.....	89.3	93.3	90.1	88.9	89.0	85.2	78.3	81.7
Shirts and collars.....	93.9	94.6	94.3	94.1	93.2	94.6	94.3	92.2
Clothing, women's.....	105.2	108.1	101.1	97.9	103.5	114.9	98.1	93.4
Millinery and lace goods.....	87.7	92.2	85.2	85.5	85.4	89.5	78.3	78.4
Iron and steel and their products	95.0	99.5	96.6	93.2	98.0	104.4	97.2	92.7
Iron and steel.....	92.8	93.9	92.3	87.5	95.8	99.1	92.3	85.2
Cast-iron pipe.....	74.2	79.4	74.1	70.5	74.8	80.3	72.7	69.8
Structural ironwork.....	101.2	106.9	103.8	100.9	104.9	113.1	105.4	103.2
Foundry and machine shop products.....	96.3	104.7	101.2	99.3	99.0	109.5	102.5	100.2
Hardware.....	92.2	92.0	88.8	87.4	95.8	94.2	88.8	88.2
Machine tools.....	118.2	135.8	132.0	124.6	132.8	146.5	137.4	131.1
Steam fittings and steam and hot-water heating apparatus.....	72.8	79.1	78.5	74.0	72.2	82.8	76.5	69.6
Stoves.....	91.3	100.2	92.6	84.7	89.0	102.3	87.4	81.8
Lumber and its products	87.6	89.6	86.3	81.2	88.3	94.9	87.4	81.2
Lumber, sawmills.....	85.3	86.2	83.8	79.8	85.7	90.6	85.6	81.7
Lumber, millwork.....	82.7	79.9	74.5	70.4	83.2	82.8	72.3	68.6
Furniture.....	97.5	104.3	99.9	91.7	99.8	111.5	101.1	88.4
Leather and its products	87.8	98.2	93.5	89.1	83.6	96.6	81.1	81.4
Leather.....	89.4	96.2	94.2	92.4	89.0	100.6	94.9	93.4
Boots and shoes.....	87.3	98.7	93.3	88.3	81.3	95.5	77.2	77.9
Paper and printing	101.2	103.1	103.7	103.8	105.1	109.1	108.5	109.4
Paper and pulp.....	94.1	96.9	96.0	95.5	97.0	100.7	98.8	98.6
Paper boxes.....	97.7	103.6	104.1	99.9	105.8	113.5	112.2	106.4
Printing, book and job.....	100.9	101.9	104.0	106.1	104.0	106.7	106.8	109.9
Printing, newspapers.....	108.5	110.9	111.2	112.0	112.7	116.6	116.4	117.7
Chemicals and allied products	95.1	102.8	100.9	96.8	97.2	106.9	104.4	103.0
Chemicals.....	102.7	105.6	103.0	102.0	106.4	109.6	107.8	106.3
Fertilizers.....	91.5	91.7	88.6	83.3	92.2	92.6	87.4	84.9
Petroleum refining.....	86.7	103.2	102.4	100.1	88.5	106.7	104.1	102.9
Stone, clay, and glass products	87.3	88.8	96.0	79.6	88.4	88.9	84.8	78.7
Cement.....	82.8	80.9	77.9	72.5	81.1	82.6	77.6	73.2
Brick, tile, and terra cotta.....	80.9	83.6	78.5	70.1	80.0	80.7	74.6	66.0
Pottery.....	96.2	94.0	95.3	95.4	93.3	94.5	93.8	93.3
Glass.....	91.5	98.3	96.6	89.2	96.3	101.7	99.4	92.8
Metal products, other than iron and steel	95.6	96.3	93.4	88.7	106.2	102.3	91.1	87.4
Stamped and enameled ware.....	90.7	90.3	90.6	82.8	94.8	93.6	84.2	78.1
Brass, bronze, and copper products.....	101.8	99.1	94.7	91.5	112.7	105.7	93.8	91.1
Tobacco products	98.0	97.0	98.2	91.4	99.5	99.5	99.6	94.0
Chewing and smoking tobacco and snuff.....	94.0	85.9	88.2	94.6	93.2	90.5	84.3	93.0
Cigars and cigarettes.....	98.5	98.4	99.5	91.0	100.3	100.7	101.4	94.1
Vehicles for land transportation	94.6	94.7	85.9	83.7	96.4	100.7	88.8	84.1
Automobiles.....	110.0	103.7	85.7	81.4	100.3	105.1	82.0	70.9
Carriages and wagons.....	77.3	84.2	76.4	66.7	83.4	92.9	83.0	69.4
Car building and repairing, electric-railroad.....	90.5	92.4	92.7	90.6	92.0	95.1	94.5	95.8
Car building and repairing, steam-railroad.....	82.5	86.8	85.7	85.5	86.2	96.7	95.5	97.0
Miscellaneous industries	97.9	113.1	108.9	106.2	100.1	114.4	107.9	108.1
Agricultural implements.....	116.6	110.1	111.2	114.4	123.1	112.8	111.1	119.3
Electrical machinery, apparatus, and supplies.....	102.5	126.5	122.3	117.8	106.1	130.6	123.8	123.2
Pianos and organs.....	78.7	66.6	66.8	57.1	82.4	68.3	66.5	55.5
Rubber boots and shoes.....	103.3	103.5	99.1	100.3	106.3	107.5	103.0	104.9
Automobile tires.....	103.9	95.1	82.2	79.4	103.5	88.3	72.5	70.9
Shipbuilding.....	90.2	106.0	110.9	115.5	93.4	109.9	114.1	120.8

Table 6 shows the general index of employment in manufacturing industries and the general index of pay-roll totals, by months, from January, 1923, to December, 1929.

TABLE 6.—GENERAL INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, JANUARY, 1923, TO DECEMBER, 1929

[Monthly average, 1926=100]

Month	Employment							Pay-roll totals						
	1923	1924	1925	1926	1927	1928	1929	1923	1924	1925	1926	1927	1928	1929
January.....	106.6	103.8	97.9	100.4	97.3	91.6	95.2	95.8	98.6	93.9	98.0	94.9	89.6	94.5
February.....	108.4	105.1	99.7	101.5	99.0	93.0	97.4	99.4	103.8	99.3	102.2	100.6	93.9	101.8
March.....	110.8	104.9	100.4	102.0	99.5	93.7	98.6	104.7	103.3	100.8	103.4	102.0	95.2	103.9
April.....	110.8	102.8	100.2	101.0	98.6	93.3	99.1	105.7	101.1	98.3	101.5	100.8	93.8	104.6
May.....	110.8	98.8	98.9	99.8	97.6	93.0	99.2	100.4	96.5	98.5	99.8	99.8	94.1	104.8
June.....	110.9	95.6	98.0	99.3	97.0	93.1	98.8	100.3	90.8	95.7	99.7	97.4	94.2	102.8
July.....	109.2	92.3	97.2	97.7	95.0	92.2	98.2	104.3	84.3	93.5	95.2	93.0	91.2	98.2
August.....	108.5	92.5	97.8	98.7	95.1	93.6	98.6	103.7	87.2	95.4	98.7	95.0	94.2	102.1
September.....	108.6	94.3	98.9	100.3	95.8	95.0	99.3	104.4	89.8	94.4	99.3	94.1	95.4	102.6
October.....	108.1	95.6	100.4	100.7	95.3	95.9	98.3	106.8	92.4	100.4	102.9	95.2	99.0	102.3
November.....	107.4	95.5	100.7	99.5	93.5	95.4	94.8	105.4	91.4	100.4	99.6	91.6	96.1	95.1
December.....	105.4	97.3	100.8	98.9	92.6	95.5	91.9	103.2	95.7	101.6	99.8	93.2	97.7	92.0
Average...	106.8	98.2	99.2	100.0	96.4	93.8	97.5	104.3	94.6	97.7	100.0	96.5	94.5	100.4

The average index of employment for the 12 months of 1929 for all industries combined was 3.9 per cent above the level for the year 1928 and 1.1 per cent higher than the average for the year 1927, while the average index of employees' earnings for the year 1929 was 6.2 per cent and 4.0 per cent above the level of the years 1928 and 1927, respectively.

Index numbers of employment and pay-roll totals for each of the 54 manufacturing industries surveyed by the Bureau of Labor Statistics and for each of the 12 groups of industries, and also general indexes for the combined 12 groups of industries, are shown in Table 7 for each month of 1929, together with average indexes for each of the years 1923, 1924, 1925, 1926, 1927, 1928, and 1929. This tabulation is in continuation of the one which appeared in the March, 1929, Labor Review (pp. 186-209), and which recorded data by months, from January, 1923, to December, 1928.

In computing the general index and the group indexes the index numbers of separate industries are weighted according to the importance of the industries.

Following Table 7 is a series of graphs, made from index numbers, showing clearly the course of employment for each month of 1929 as compared with the same month of 1928. The first chart represents the 54 separate industries combined and shows the course of pay-roll totals as well as the course of employment, while the following charts show the trend of employment alone through each month of the two years in each separate industry.

TABLE 7.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES—JANUARY TO DECEMBER, 1929, AND YEARLY AVERAGES, 1923, 1924, 1925, 1926, 1927, 1928, AND 1929

[Monthly average, 1926=100]

Month and year	General index		Food and kindred products							
			Group index		Slaughtering and meat packing		Confectionery		Ice cream	
	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals
1923 average	108.8	104.3	111.1	106.3	122.9	118.4	116.3	107.0	103.9	95.8
1924 average	98.2	94.6	106.4	104.4	115.1	111.8	103.2	99.9	100.3	93.1
1925 average	99.2	97.7	101.2	99.9	104.4	102.6	98.1	96.4	101.3	98.3
1926 average	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average	96.4	96.5	99.4	100.0	99.5	99.9	96.5	97.9	94.0	93.4
1928 average	93.8	94.5	96.4	99.8	99.5	101.0	93.0	93.3	92.4	93.1
1929 average	97.5	104.0	99.4	101.7	101.0	103.2	92.3	94.1	91.9	93.0
1929										
January	95.2	94.5	98.4	99.6	105.9	108.4	90.9	91.9	79.9	78.9
February	97.4	101.8	98.6	99.8	103.4	103.9	90.5	91.8	79.3	81.1
March	98.6	103.9	97.4	98.6	98.3	97.9	88.5	90.8	80.6	82.7
April	99.1	104.6	95.9	97.7	96.3	98.0	84.0	85.7	90.1	91.6
May	99.2	104.8	96.9	100.4	97.8	99.6	84.2	87.3	93.8	95.4
June	98.8	102.8	96.9	102.7	100.1	103.2	83.0	86.8	106.3	107.3
July	98.2	98.7	99.5	102.8	100.9	105.2	81.2	80.1	110.4	112.0
August	98.6	102.1	99.4	102.2	99.9	101.1	85.7	88.6	108.0	107.4
September	99.3	102.6	102.1	105.3	100.6	104.2	99.8	102.0	102.5	103.3
October	98.3	102.3	104.0	106.0	101.4	103.8	111.0	112.7	90.6	91.2
November	94.8	95.1	101.4	102.7	101.8	104.4	106.1	105.4	82.3	83.7
December	91.9	92.0	100.3	102.8	105.0	108.4	102.5	105.7	79.3	81.6
Food and kindred products—Continued										
Textiles and their products										
	Flour		Baking		Sugar refining, cane		Group index		Cotton goods	
	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals
1923 average	114.2	110.9	99.2	94.8	106.8	104.6	116.1	116.4	120.3	123.5
1924 average	108.1	108.2	100.5	98.4	104.6	105.4	102.4	101.0	99.9	99.6
1925 average	103.1	102.5	98.7	97.1	104.5	104.6	103.7	104.2	101.1	101.1
1926 average	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average	99.3	99.4	101.4	102.2	98.8	98.8	101.3	103.0	105.0	108.5
1928 average	100.0	102.1	100.9	101.6	91.1	94.9	96.3	95.6	95.2	91.7
1929 average	102.1	105.3	102.1	103.5	94.0	98.5	97.0	97.2	95.5	94.3
1929										
January	101.1	101.5	98.7	98.5	90.4	92.8	96.9	96.3	98.6	97.6
February	104.2	104.1	100.5	101.3	92.4	95.8	98.8	102.2	99.1	100.3
March	101.5	103.1	101.7	102.2	98.1	104.0	99.9	104.3	98.6	100.1
April	97.9	98.0	100.6	100.7	98.1	105.7	98.7	100.6	96.7	98.7
May	96.8	101.3	102.0	104.7	94.4	102.5	97.9	96.5	96.9	97.5
June	97.0	101.0	103.8	105.9	97.5	103.6	97.3	97.3	96.8	95.2
July	103.0	104.9	103.7	105.3	96.4	97.8	94.3	91.1	93.5	90.9
August	104.9	110.5	102.3	103.9	99.2	104.8	95.1	95.0	91.6	88.4
September	106.4	115.0	104.4	106.5	89.5	92.1	97.1	97.8	94.0	91.2
October	106.5	112.6	105.2	107.1	96.8	103.0	98.2	100.0	94.8	94.2
November	103.5	105.4	102.5	104.3	90.8	90.5	95.8	92.6	93.8	89.6
December	101.8	106.0	100.0	101.7	84.2	89.5	93.5	90.7	92.0	87.9

TABLE 7.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES—JANUARY TO DECEMBER, 1929, AND YEARLY AVERAGES, 1923, 1924, 1925, 1926, 1927, 1928, AND 1929—Continued

Year and month	Textiles and their products—Continued									
	Hosiery and knit goods		Silk goods		Woolen and worsted goods		Carpets and rugs		Dyeing and finishing textiles	
	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals
1923 average	102.1	91.3	99.8	93.9	124.5	126.7	106.5	110.1	102.1	99.9
1924 average	92.6	82.9	94.1	88.6	113.3	114.1	98.1	95.2	94.0	91.8
1925 average	100.2	96.4	103.1	102.7	110.7	110.6	100.7	101.2	101.7	102.3
1926 average	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average	99.0	102.2	98.4	99.2	99.7	100.6	102.5	104.1	108.7	102.8
1928 average	94.7	97.3	96.9	100.2	95.0	94.4	101.0	95.9	99.5	101.0
1929 average	98.1	104.3	98.0	100.9	96.0	96.3	106.8	101.4	101.8	102.2
1929										
January	92.9	93.8	95.2	92.8	98.3	98.6	107.9	102.0	102.0	104.2
February	95.5	101.6	97.9	103.7	97.6	99.6	108.4	103.3	104.7	110.0
March	97.1	104.1	99.9	106.4	96.5	97.2	109.6	104.0	105.2	109.8
April	97.8	105.5	100.5	106.7	96.9	98.5	109.3	103.7	104.3	107.4
May	98.0	105.4	99.2	105.1	97.4	99.7	107.6	102.8	103.1	106.5
June	97.7	104.6	97.9	102.9	96.1	97.0	106.1	99.8	101.6	100.8
July	96.5	97.0	97.8	98.8	93.9	93.0	102.5	93.0	99.4	96.1
August	97.2	101.0	98.3	101.3	96.8	96.9	105.0	98.5	98.0	97.4
September	100.6	106.3	98.1	100.6	97.4	98.1	103.8	99.2	100.8	100.0
October	103.2	113.7	98.1	101.8	98.5	100.7	109.1	108.4	102.4	103.5
November	102.6	111.2	96.7	95.5	93.6	89.8	108.3	106.7	100.8	96.5
December	98.3	107.2	96.1	95.2	89.5	86.3	104.3	95.0	99.0	94.4
Textiles and their products—Continued										Iron and steel and their products
	Clothing, men's		Shirts and collars		Clothing, women's		Millinery and lace goods		Group index	
	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals
1923 average	118.6	128.4	118.9	117.1	126.3	124.4	138.1	133.1	106.5	102.7
1924 average	106.9	111.0	100.6	97.5	111.9	108.6	120.3	117.1	93.8	89.1
1925 average	103.1	105.8	103.3	103.2	105.6	109.3	117.1	115.8	95.0	93.3
1926 average	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average	97.8	97.3	95.0	96.3	105.4	107.4	95.6	96.8	93.2	91.9
1928 average	92.2	89.0	92.2	89.9	105.4	105.2	93.5	92.7	91.5	92.8
1929 average	91.9	88.2	92.7	90.8	105.4	105.1	93.1	91.1	95.9	102.6
1929										
January	89.3	86.9	91.6	86.1	105.6	107.4	92.6	89.9	94.8	95.5
February	92.2	94.8	92.5	91.4	110.9	117.0	98.4	98.8	97.2	102.5
March	93.7	97.9	94.4	96.1	117.2	124.7	101.8	107.5	99.2	105.2
April	88.9	80.2	93.1	92.8	115.3	116.0	103.8	107.0	100.4	107.4
May	88.1	82.6	92.6	87.4	110.7	104.6	97.3	95.6	101.5	108.4
June	93.7	92.9	91.1	86.7	104.2	97.5	91.9	91.9	101.7	106.8
July	93.6	90.3	89.0	88.4	93.7	81.5	84.0	76.1	101.1	101.9
August	95.7	95.1	91.1	89.6	97.2	97.6	90.4	87.4	100.4	104.5
September	95.3	92.0	93.9	91.5	102.8	108.7	94.0	93.2	100.7	104.2
October	93.3	85.2	94.6	94.6	108.1	114.9	92.2	89.5	95.5	104.4
November	90.1	78.3	94.3	94.3	101.1	98.1	85.2	78.3	96.6	97.2
December	88.9	81.7	94.1	92.2	97.9	93.4	85.5	78.4	93.2	92.7

TABLE 7.—INDEXES TO EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES—JANUARY TO DECEMBER, 1929, AND YEARLY AVERAGES, 1923, 1924, 1925, 1926, 1927, 1928, AND 1929—Continued

Year and month	Iron and steel and their products—Continued									
	Iron and steel		Cast-iron pipe		Structural ironwork		Foundry and machine-shop products		Hardware	
	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals
1923 average.....	102.1	97.3	94.3	92.8	100.8	93.9	115.3	110.7	113.4	102.0
1924 average.....	95.4	91.3	98.2	97.8	91.7	86.3	93.0	87.2	104.2	95.7
1925 average.....	97.9	96.4	95.6	96.2	92.5	91.5	93.1	90.6	103.6	98.4
1926 average.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average.....	92.9	91.4	89.8	88.1	94.9	95.0	93.8	92.4	92.2	90.9
1928 average.....	90.9	92.7	80.1	75.9	95.0	97.9	92.3	92.8	88.9	88.4
1929 average.....	94.7	99.3	76.1	75.5	102.1	104.4	104.3	108.1	91.9	93.7
1929										
January.....	93.4	95.5	73.3	67.0	97.7	96.3	97.6	97.7	92.2	93.0
February.....	94.0	100.2	69.1	70.3	97.6	99.2	101.3	106.7	94.8	99.1
March.....	95.0	102.2	73.4	69.9	98.1	99.3	104.4	111.0	95.3	98.4
April.....	95.9	104.8	74.5	73.7	98.7	101.6	106.8	114.1	92.9	95.6
May.....	97.1	105.9	76.0	75.0	100.4	103.6	108.3	115.4	93.4	97.1
June.....	97.2	104.0	78.6	78.3	102.3	104.7	108.6	113.5	92.8	95.9
July.....	96.6	97.6	80.4	81.8	104.3	104.3	108.4	109.7	91.6	89.6
August.....	97.5	103.4	81.7	83.3	106.8	110.5	105.3	109.0	89.4	90.9
September.....	96.3	101.7	81.8	83.3	107.7	112.1	105.7	108.1	92.2	93.4
October.....	93.9	99.1	79.4	80.3	106.9	113.1	104.7	109.5	92.0	94.2
November.....	92.3	92.3	74.1	72.7	103.8	105.4	101.2	102.5	88.8	88.8
December.....	87.5	85.2	70.5	69.8	100.9	103.2	99.3	100.2	87.4	88.2
Iron and steel and their products—Continued										
Lumber and its products										
Machine tools			Steam fittings and steam and hot-water heating apparatus		Stoves		Group index		Lumber, sawmills	
1923 average.....	98.1	88.5	103.3	98.0	116.3	113.9	110.0	102.4	115.1	106.5
1924 average.....	82.0	74.9	98.6	95.4	100.3	101.0	104.4	99.6	108.0	102.8
1925 average.....	85.8	83.4	100.1	97.4	97.8	97.8	102.5	100.4	103.6	101.7
1926 average.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average.....	92.8	92.2	92.5	91.9	91.2	90.4	91.9	93.1	91.0	92.4
1928 average.....	100.8	107.5	82.2	81.9	87.6	84.7	87.8	88.8	86.7	88.0
1929 average.....	129.8	139.8	78.5	78.8	90.8	87.3	87.9	88.9	85.9	86.9
1929										
January.....	120.1	129.1	81.2	78.4	81.1	73.8	85.2	81.9	82.2	77.9
February.....	124.3	138.0	84.3	88.0	88.4	85.2	85.5	84.9	82.1	80.1
March.....	129.0	142.3	82.6	85.7	90.6	87.3	96.2	86.8	83.1	82.0
April.....	129.7	144.0	81.4	82.8	92.4	89.7	88.0	89.4	86.4	87.2
May.....	130.3	143.1	78.2	79.6	92.9	91.1	90.0	91.3	88.4	91.5
June.....	132.3	144.1	76.6	76.4	92.2	89.0	89.8	90.7	89.6	90.6
July.....	133.2	140.4	72.8	70.8	85.7	80.3	90.3	90.3	89.5	91.7
August.....	131.2	137.6	76.6	76.2	91.5	85.8	92.0	93.1	90.8	91.2
September.....	134.9	143.9	77.2	78.2	97.1	93.4	91.4	94.9	89.0	92.6
October.....	135.8	146.5	79.1	82.8	100.2	102.3	89.6	94.9	86.2	90.6
November.....	132.0	137.4	78.5	76.5	92.6	87.4	86.3	87.4	83.8	85.6
December.....	124.6	131.1	74.0	69.6	84.7	81.8	81.2	81.2	79.8	81.7

TABLE 7.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES—JANUARY TO DECEMBER, 1929, AND YEARLY AVERAGES, 1923, 1924, 1925, 1926, 1927, 1928, AND 1929—Continued

Year and month	Lumber and its products—Continued				Leather and its products					
	Lumber, mill-work		Furniture		Group index		Leather		Boots and shoes	
	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals
1923 average.....	101.5	95.5	100.4	94.2	110.7	113.9	109.6	107.0	111.1	117.0
1924 average.....	101.2	98.0	95.2	90.7	100.3	100.6	96.9	95.7	101.6	102.8
1925 average.....	103.0	101.8	99.1	95.6	101.9	101.8	98.7	97.5	102.9	103.6
1926 average.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average.....	89.2	89.2	96.1	98.2	97.9	97.4	98.4	97.2	97.7	97.6
1928 average.....	85.5	85.6	92.5	93.2	92.8	89.7	95.4	93.7	91.9	88.0
1929 average.....	83.1	82.8	95.9	97.0	92.8	89.9	92.2	93.2	92.9	89.0
1929										
January.....	83.3	79.1	94.2	92.0	91.0	87.1	90.8	87.6	91.0	86.9
February.....	83.6	81.1	95.4	97.0	93.1	91.3	91.3	92.0	93.5	91.0
March.....	86.0	86.4	94.6	96.7	91.8	88.2	90.0	88.6	92.2	88.1
April.....	86.8	87.6	92.9	94.9	89.7	85.0	89.4	89.4	89.8	83.7
May.....	87.4	88.3	91.7	93.0	89.3	85.1	89.2	90.3	89.3	83.6
June.....	87.4	87.9	92.0	92.9	88.5	86.8	90.0	92.2	88.1	85.2
July.....	87.2	85.7	94.3	90.6	93.6	94.4	93.0	93.6	93.8	94.6
August.....	86.9	88.2	98.2	100.1	97.1	101.3	94.2	97.6	97.8	102.4
September.....	84.1	85.8	102.1	105.6	98.4	100.7	95.3	97.6	99.2	101.6
October.....	79.9	82.8	104.3	111.5	98.2	96.6	96.2	100.6	98.7	95.5
November.....	74.5	72.3	99.9	101.1	93.5	81.1	94.2	94.9	93.3	77.2
December.....	70.4	68.6	91.7	88.4	89.1	81.4	92.4	81.4	88.3	77.9
Paper and printing										
	Group index		Paper and pulp		Paper boxes		Printing, book and job		Printing, news-papers	
1923 average.....	96.5	89.7	104.6	97.6	98.9	91.3	96.1	87.8	89.5	84.5
1924 average.....	96.7	91.7	98.6	94.4	98.2	93.3	97.9	90.8	93.1	89.7
1925 average.....	97.3	94.3	98.7	96.8	98.8	95.6	97.5	93.1	95.4	93.0
1926 average.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average.....	100.1	101.3	97.5	96.6	96.8	99.0	100.3	102.1	103.4	104.6
1928 average.....	99.2	101.5	94.4	94.9	94.0	99.4	99.2	101.6	105.2	107.4
1929 average.....	101.3	106.0	95.5	98.2	96.0	103.3	102.6	105.8	108.3	112.8
1929										
January.....	99.6	103.2	94.5	95.7	92.2	97.4	100.8	103.2	107.1	110.1
February.....	100.4	104.7	95.0	98.5	92.6	99.1	102.9	105.3	107.0	110.0
March.....	100.1	106.4	95.0	98.4	92.6	101.3	102.5	108.4	106.6	111.5
April.....	99.6	104.9	95.3	98.4	92.9	100.7	99.9	103.7	107.1	111.9
May.....	99.9	105.8	95.0	98.1	92.5	100.3	100.9	106.0	107.5	112.8
June.....	100.2	105.2	95.7	97.7	93.2	99.7	100.9	104.8	107.7	112.6
July.....	100.6	103.1	95.4	95.7	94.2	100.0	102.8	102.6	106.9	109.8
August.....	101.1	104.4	96.0	98.7	95.1	100.7	103.1	103.6	107.1	110.4
September.....	102.9	107.7	96.2	98.5	99.0	108.0	105.6	108.3	108.9	113.9
October.....	103.1	109.1	96.9	100.7	103.6	113.5	101.9	106.7	110.9	116.6
November.....	103.7	108.5	96.0	98.8	104.1	112.2	104.0	106.8	111.2	116.4
December.....	103.8	109.4	95.5	98.6	99.9	106.4	106.1	109.9	112.0	117.7

TABLE 7.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES—JANUARY TO DECEMBER, 1929, AND YEARLY AVERAGES, 1923, 1924, 1925, 1926, 1927, 1928, AND 1929—Continued

Year and month	Chemicals and allied products								Stone, clay and glass products	
	Group index		Chemicals		Fertilizers		Petroleum refining		Group index	
	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals
1923 average.....	101.8	96.2	104.9	96.6	96.2	91.8	99.7	102.1	100.2	93.5
1924 average.....	93.1	91.0	96.2	92.5	86.9	83.6	91.8	91.7	97.0	95.2
1925 average.....	95.8	94.2	97.3	94.3	95.1	90.6	94.0	95.2	97.0	97.3
1926 average.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average.....	96.6	99.1	100.0	103.7	91.2	94.0	94.6	95.6	94.5	94.2
1928 average.....	93.4	95.9	99.3	103.3	95.4	97.1	84.8	87.2	89.7	89.6
1929 average.....	99.4	102.3	103.2	107.1	95.2	94.7	96.5	99.1	86.6	85.3
1929										
January.....	94.4	95.1	102.7	104.8	92.0	90.4	86.1	86.8	81.6	77.5
February.....	97.3	99.5	106.1	110.2	95.1	90.2	88.3	90.9	81.7	79.6
March.....	103.2	102.5	105.0	109.1	138.6	125.3	90.4	92.4	84.0	83.3
April.....	107.8	107.0	104.7	109.9	167.5	152.2	92.7	96.6	87.5	87.7
May.....	97.4	101.9	102.0	107.6	90.1	92.7	94.7	98.0	89.9	90.1
June.....	94.4	99.9	101.3	105.8	63.6	73.6	96.4	98.9	90.7	90.8
July.....	95.8	100.4	100.4	103.4	67.4	76.7	99.4	101.6	88.1	83.5
August.....	98.1	102.0	102.2	105.2	73.8	78.2	101.0	103.1	90.6	89.4
September.....	101.6	105.2	103.6	106.0	90.9	92.3	102.7	106.6	90.5	89.6
October.....	102.8	106.9	105.6	109.6	91.7	92.6	103.2	106.7	88.8	88.9
November.....	100.9	104.4	103.0	107.8	88.6	87.4	102.4	104.1	86.0	84.8
December.....	98.8	103.0	102.0	106.3	83.3	84.9	100.1	102.9	79.6	78.7
Stone, clay, and glass products—Continued									Metal prod- ucts, other than iron and steel	
	Cement		Brick, tile, and terra cotta		Pottery		Glass		Group index	
	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals
1923 average.....	100.0	104.2	99.3	95.1	93.7	85.8	101.1	92.6	102.6	101.5
1924 average.....	108.9	107.9	97.4	98.5	100.6	95.1	91.4	88.2	95.1	93.0
1925 average.....	105.3	104.9	98.9	99.1	98.3	96.3	94.4	93.4	99.2	99.4
1926 average.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average.....	95.8	96.5	94.3	94.1	94.5	94.2	94.2	93.4	92.9	91.6
1928 average.....	87.7	88.3	84.9	82.8	95.3	93.4	92.9	94.3	92.8	96.1
1929 average.....	81.1	81.0	80.5	76.9	94.2	91.0	94.6	97.3	97.6	102.8
1929										
January.....	78.5	72.0	72.7	67.6	94.3	85.2	89.7	91.2	97.2	102.4
February.....	77.5	74.1	70.2	65.2	95.4	92.7	93.9	96.8	100.7	109.4
March.....	79.5	77.5	72.9	69.9	97.1	94.0	96.0	100.7	101.9	112.3
April.....	81.2	81.7	80.4	78.3	96.5	96.9	96.7	100.1	102.9	112.3
May.....	83.7	85.1	85.8	84.3	96.3	93.4	96.0	99.9	100.8	109.1
June.....	85.5	87.6	87.6	86.2	93.8	90.5	96.4	99.5	98.9	104.6
July.....	86.0	85.0	88.6	82.9	87.1	77.4	88.9	86.8	97.4	100.1
August.....	85.8	87.8	88.6	84.6	91.9	88.6	95.6	97.9	97.1	102.1
September.....	84.2	87.3	87.3	82.4	92.7	91.1	97.4	100.6	96.2	100.6
October.....	80.9	82.6	83.6	80.7	94.0	94.5	98.3	101.7	96.3	102.3
November.....	77.9	77.6	78.5	74.6	95.3	93.8	96.6	99.4	93.4	91.1
December.....	72.5	73.2	70.1	66.0	95.4	93.3	89.2	92.8	88.7	87.4

TABLE 7.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES—JANUARY TO DECEMBER, 1929, AND YEARLY AVERAGES, 1923, 1924, 1925, 1926, 1927, 1928, AND 1929—Continued

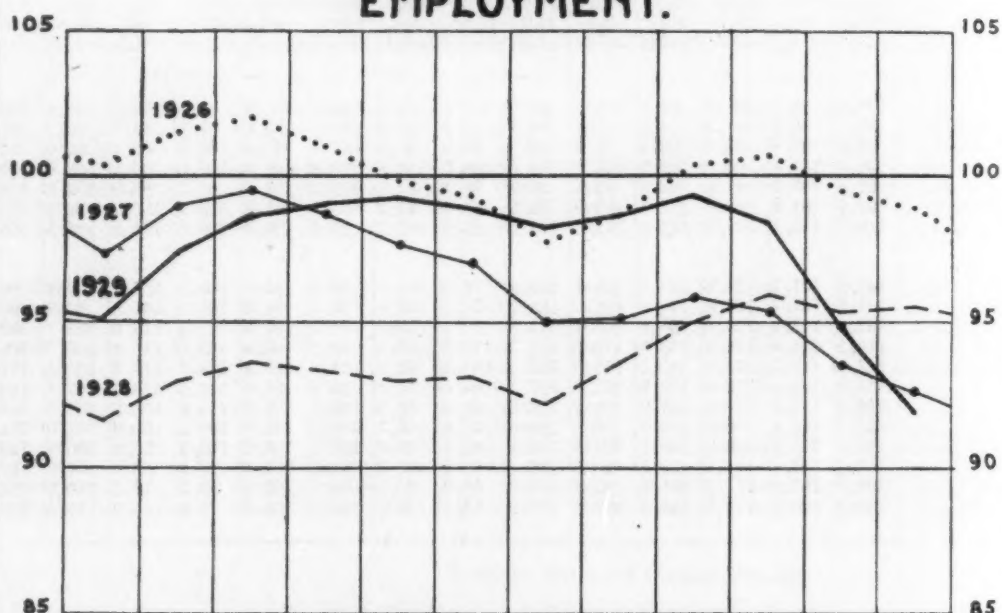
Year and month	Metal products, other than iron and steel—Continued				Tobacco products					
	Stamped and enameled ware		Brass, bronze, and copper products		Group index		Chewing and smoking tobacco and snuff		Cigars and cigarettes	
	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals
1923 average.....	105.2	109.3	101.3	98.9	116.9	114.0	105.4	100.1	118.3	115.9
1924 average.....	94.7	93.2	95.2	92.9	109.8	108.9	105.2	101.2	110.4	109.9
1925 average.....	99.0	100.2	99.2	99.1	107.5	105.7	97.0	98.3	109.0	106.7
1926 average.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average.....	88.9	90.6	94.5	92.0	98.1	97.1	97.7	97.7	98.1	97.0
1928 average.....	88.8	90.4	94.4	98.0	98.0	93.5	95.2	94.1	96.0	93.4
1929 average.....	90.4	91.1	101.1	107.4	93.6	92.8	89.3	89.6	94.2	93.2
1929										
January.....	87.8	84.8	101.7	109.3	86.3	81.0	95.1	96.8	85.2	79.1
February.....	91.4	95.7	105.1	114.8	94.2	87.2	96.2	96.0	93.9	86.1
March.....	93.0	98.6	106.1	117.7	94.3	89.2	94.3	89.9	94.2	89.1
April.....	94.3	97.8	107.0	118.0	93.2	91.0	88.1	89.1	93.9	91.2
May.....	92.7	96.3	104.6	114.1	92.3	91.0	85.5	84.8	93.2	91.8
June.....	91.1	93.4	102.6	109.1	93.5	93.6	87.1	91.4	94.3	93.9
July.....	90.4	88.9	100.8	104.6	92.5	92.9	83.0	85.8	93.7	93.8
August.....	90.4	92.9	100.3	105.8	94.0	95.7	84.4	87.6	96.3	96.7
September.....	89.7	89.3	99.3	105.1	95.0	98.6	89.3	86.8	96.7	100.0
October.....	90.3	93.6	99.1	105.7	97.0	99.5	85.9	89.5	98.4	100.7
November.....	90.6	84.2	94.7	93.8	93.2	99.6	88.2	84.3	99.5	101.4
December.....	82.8	78.1	91.5	91.1	91.4	94.0	94.6	93.0	91.0	94.1
Vehicles for land transportation										
	Group index		Automobiles		Carriages and wagons		Car building and repairing, electric-railroad		Car building and repairing, steam-railroad	
	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals	Em- ploy- ment	Pay- roll totals
1923 average.....	109.6	107.7	93.0	92.0	108.8	108.3	112.7	110.1	123.8	120.9
1924 average.....	97.2	94.3	87.0	83.8	90.8	95.0	100.0	97.8	105.8	102.8
1925 average.....	99.8	100.7	99.0	102.4	100.2	100.4	99.6	100.5	100.6	99.4
1926 average.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average.....	90.8	91.6	91.2	90.3	78.7	83.6	100.9	101.1	90.3	92.3
1928 average.....	95.8	95.3	111.3	114.4	76.7	82.1	94.9	96.2	83.5	85.4
1929 average.....	99.8	105.2	116.9	118.7	78.6	84.1	91.9	93.9	85.1	92.3
1929										
January.....	99.8	95.5	121.1	111.4	69.2	74.3	90.5	90.6	81.6	79.6
February.....	105.6	114.8	132.5	143.3	71.0	75.6	90.5	91.3	82.8	87.6
March.....	106.9	117.2	134.2	144.2	80.8	87.2	93.8	94.8	83.6	91.3
April.....	107.8	120.1	134.5	147.8	80.8	86.2	91.3	94.5	85.3	93.7
May.....	107.5	118.7	133.0	143.1	81.3	85.6	93.4	95.6	85.8	95.5
June.....	103.1	100.6	123.4	127.4	79.4	83.1	90.6	93.8	85.9	93.0
July.....	101.7	96.4	120.5	107.2	81.0	85.1	92.8	93.6	85.7	89.7
August.....	100.8	100.1	117.6	124.6	87.9	94.5	92.9	93.9	86.3	94.3
September.....	99.9	104.6	115.7	117.0	85.0	92.2	91.5	93.3	86.5	93.2
October.....	94.7	100.7	103.7	105.1	84.2	92.9	92.4	95.1	86.8	96.7
November.....	85.9	88.8	85.7	82.0	76.4	83.0	92.7	94.5	85.7	95.5
December.....	83.7	84.1	81.4	70.9	66.7	69.4	90.6	95.8	85.5	97.0

TABLE 7.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN **MANUFACTURING INDUSTRIES**—JANUARY TO DECEMBER, 1929, AND YEARLY AVERAGES, 1923, 1924, 1925, 1926, 1927, 1928, AND 1929—Continued

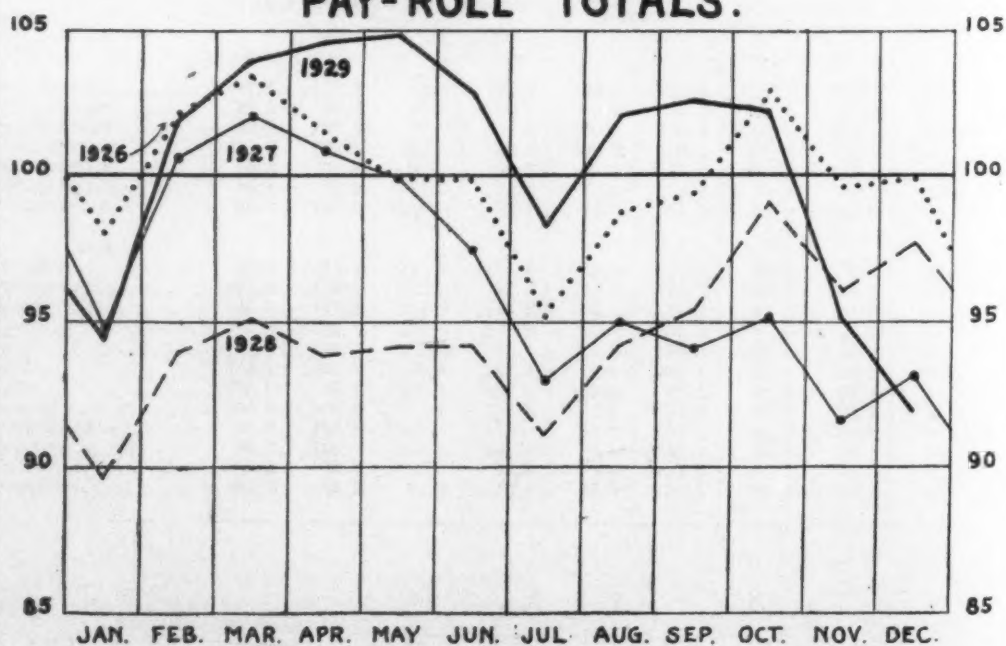
Year and month	Miscellaneous industries													
	Group index		Agricultural implements		Electrical machinery, apparatus, and supplies		Pianos and organs		Rubber boots and shoes		Automobile tires		Shipbuilding	
	Em- plov- ment	Pay- roll totals	Em- plov- ment	Pay- roll totals	Em- plov- ment	Pay- roll totals	Em- plov- ment	Pay- roll totals	Em- plov- ment	Pay- roll totals	Em- plov- ment	Pay- roll totals	Em- plov- ment	Pay- roll totals
1923 average---	103.3	98.1	101.3	89.8	101.3	97.0	105.3	94.9	116.7	107.2	91.1	88.2	108.6	103.0
1924 average---	99.7	89.0	81.2	75.2	95.1	94.7	99.9	96.6	82.7	76.6	88.6	88.1	90.2	88.8
1925 average---	94.6	92.8	93.6	90.8	92.1	92.2	98.9	97.8	97.1	97.7	102.2	100.4	92.6	90.3
1926 average---	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average---	99.5	100.9	91.9	92.2	95.1	95.7	90.4	87.4	103.3	107.7	97.3	98.2	104.8	105.8
1928 average---	91.6	91.9	106.8	111.8	93.9	95.9	77.1	74.3	101.1	101.0	103.3	105.7	82.8	83.0
1929 average---	110.7	112.3	121.1	125.3	118.3	121.5	66.6	63.8	97.6	99.3	104.1	101.8	105.3	108.1
1929														
January-----	102.8	101.7	121.3	124.1	103.4	103.8	76.3	71.8	99.8	96.1	108.2	103.4	94.1	93.6
February-----	104.6	107.3	126.8	134.3	106.1	108.0	74.3	69.0	96.1	91.0	109.5	117.8	94.3	96.2
March-----	107.4	112.6	129.4	138.5	109.4	115.8	72.1	70.3	94.3	91.6	111.4	118.0	101.1	102.8
April-----	110.5	114.6	134.3	142.8	113.0	117.7	70.5	66.5	93.0	92.9	113.0	118.6	107.7	109.7
May-----	113.1	117.7	131.6	140.1	118.0	123.1	66.5	63.0	91.6	95.4	114.7	119.4	108.6	112.0
June-----	115.3	118.5	126.9	131.3	123.1	127.7	64.6	61.8	93.2	97.8	113.9	113.1	107.4	113.2
July-----	116.3	115.7	122.2	121.9	126.2	127.0	61.6	56.3	96.5	99.8	111.8	106.3	107.5	109.8
August-----	115.2	113.4	116.2	119.7	126.9	126.3	57.9	53.1	100.2	102.6	107.2	100.9	105.0	104.5
September-----	114.7	115.1	109.2	108.1	127.3	130.8	65.4	63.6	103.3	109.0	102.3	92.9	105.8	110.6
October-----	113.1	114.4	110.1	112.8	126.5	130.6	66.6	68.3	103.5	107.5	95.1	88.3	106.0	109.9
November-----	108.9	107.9	111.2	111.1	122.3	123.8	66.8	66.5	99.1	103.0	82.2	72.5	110.9	114.1
December-----	106.2	106.1	114.4	119.3	117.8	123.2	57.1	55.5	100.3	104.9	79.4	70.9	115.5	120.8

MANUFACTURING INDUSTRIES.
MONTHLY INDEXES, 1926-1929.
MONTHLY AVERAGE 1926 = 100.

EMPLOYMENT.

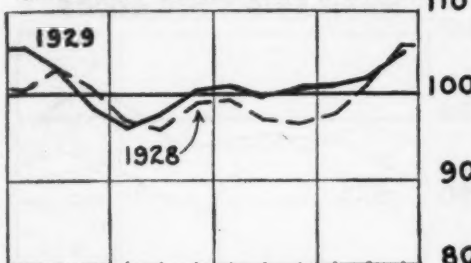


PAY-ROLL TOTALS.

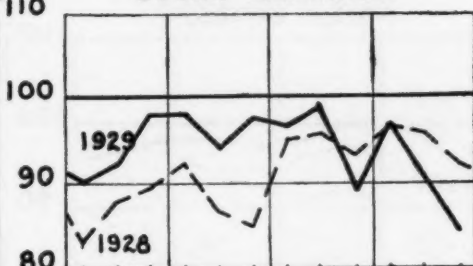


TREND OF EMPLOYMENT. (MONTHLY AVERAGE 1926=100.)

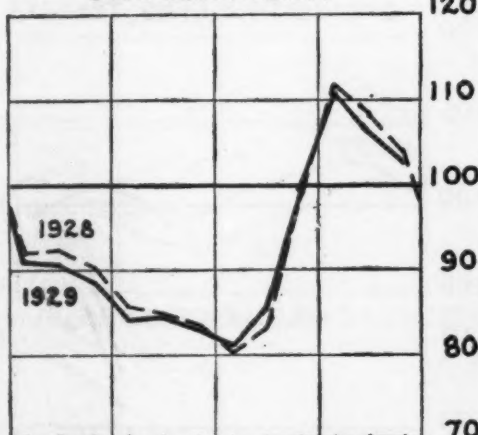
SLAUGHTERING & MEAT PACKING



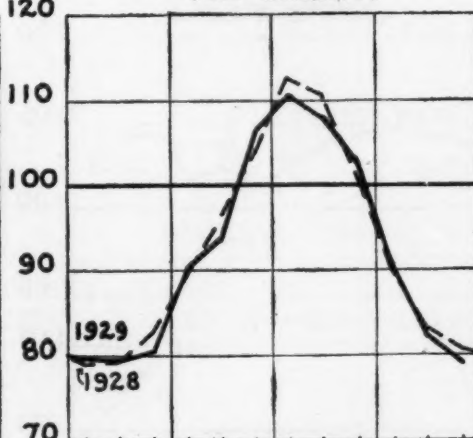
SUGAR REFINING.



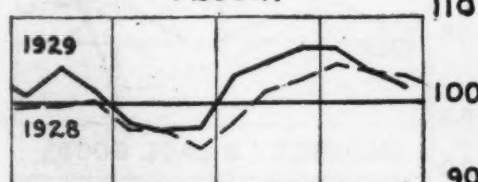
CONFECTIONERY.



ICE CREAM.



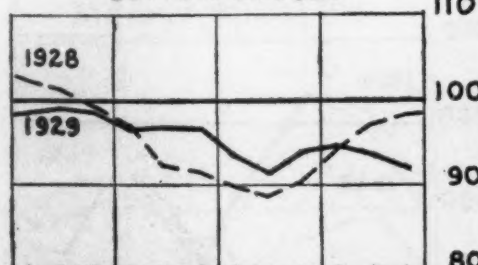
FLOUR.



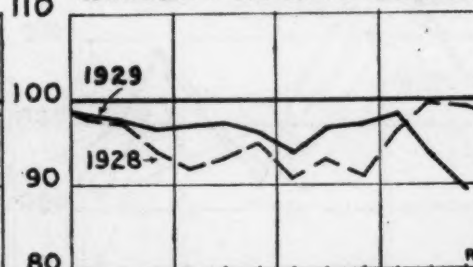
BAKING.



COTTON GOODS.



WOOLEN & WORSTED GOODS.

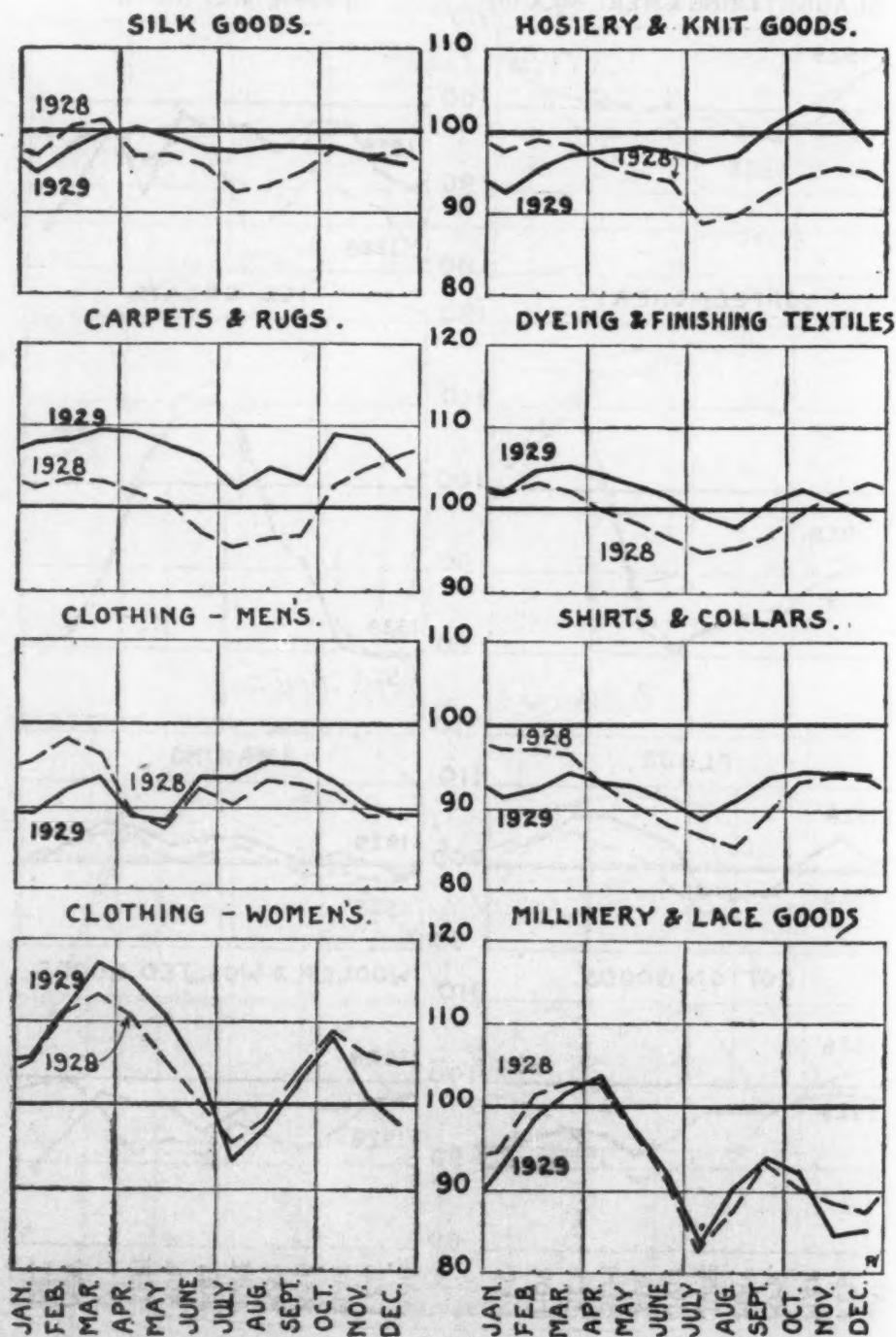


JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.

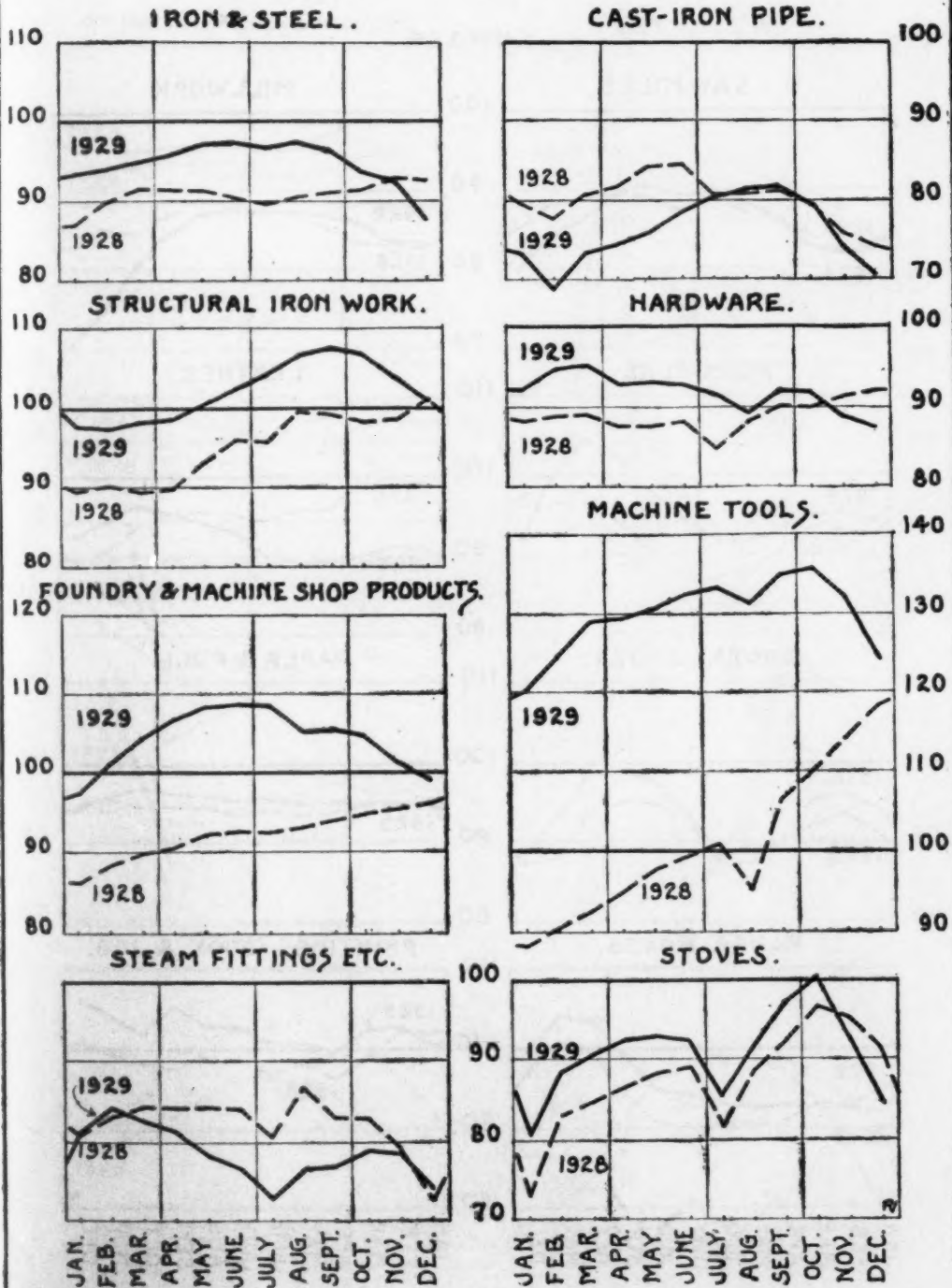
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.

TREND OF EMPLOYMENT.

(MONTHLY AVERAGE 1926 = 100.)

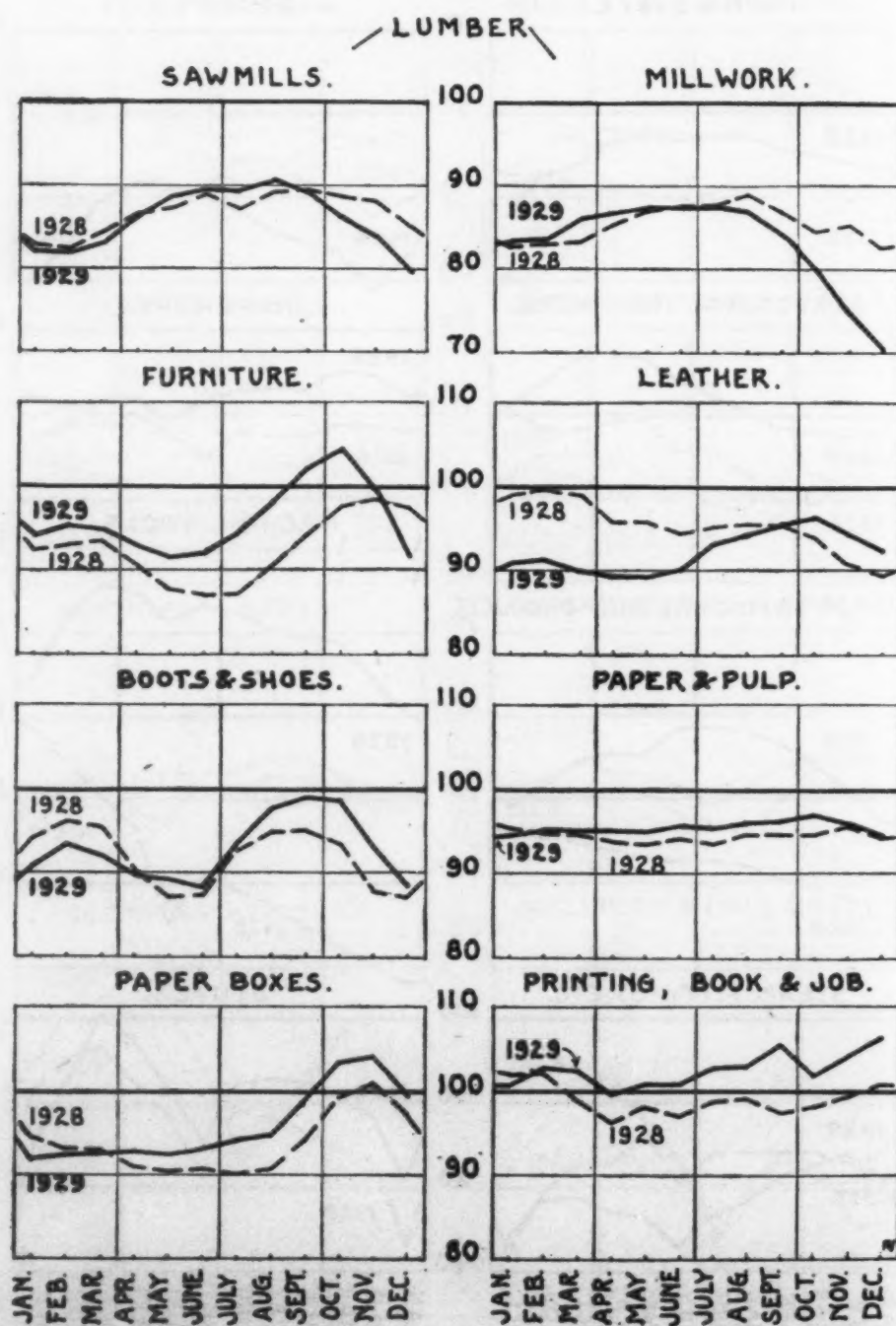


TREND OF EMPLOYMENT. (MONTHLY AVERAGE 1926 = 100)

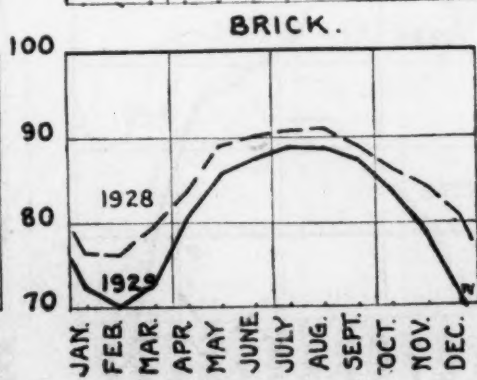
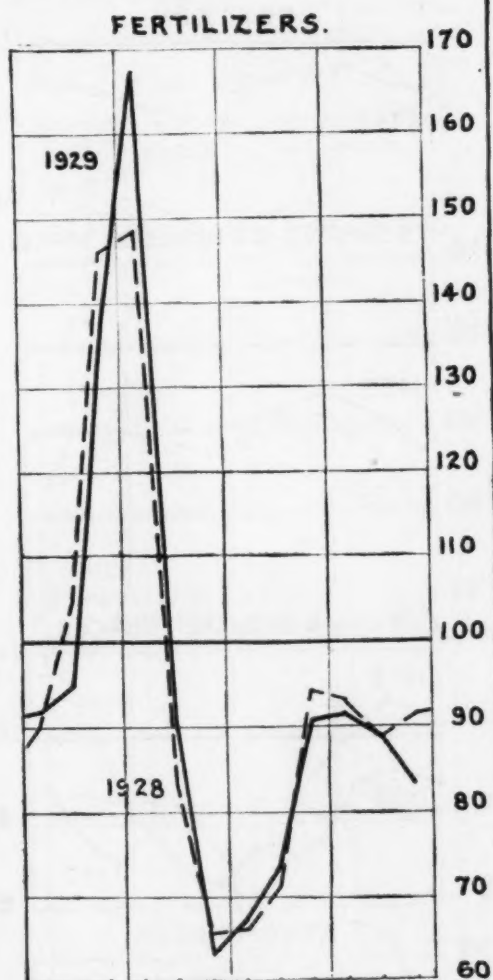
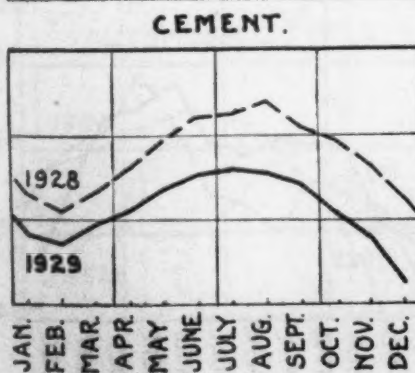
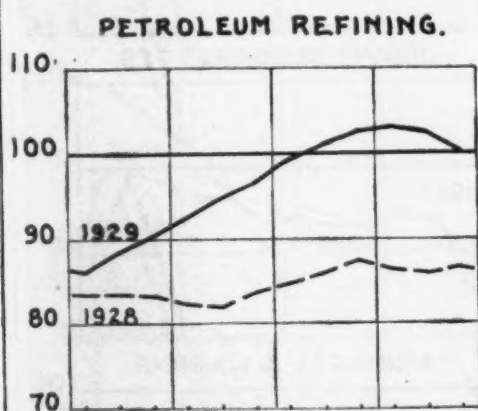
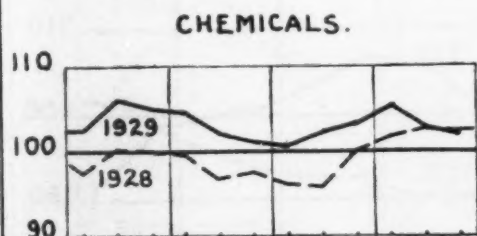
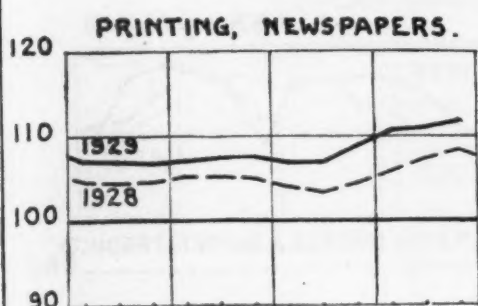


TREND OF EMPLOYMENT.

(MONTHLY AVERAGE 1926 = 100.)

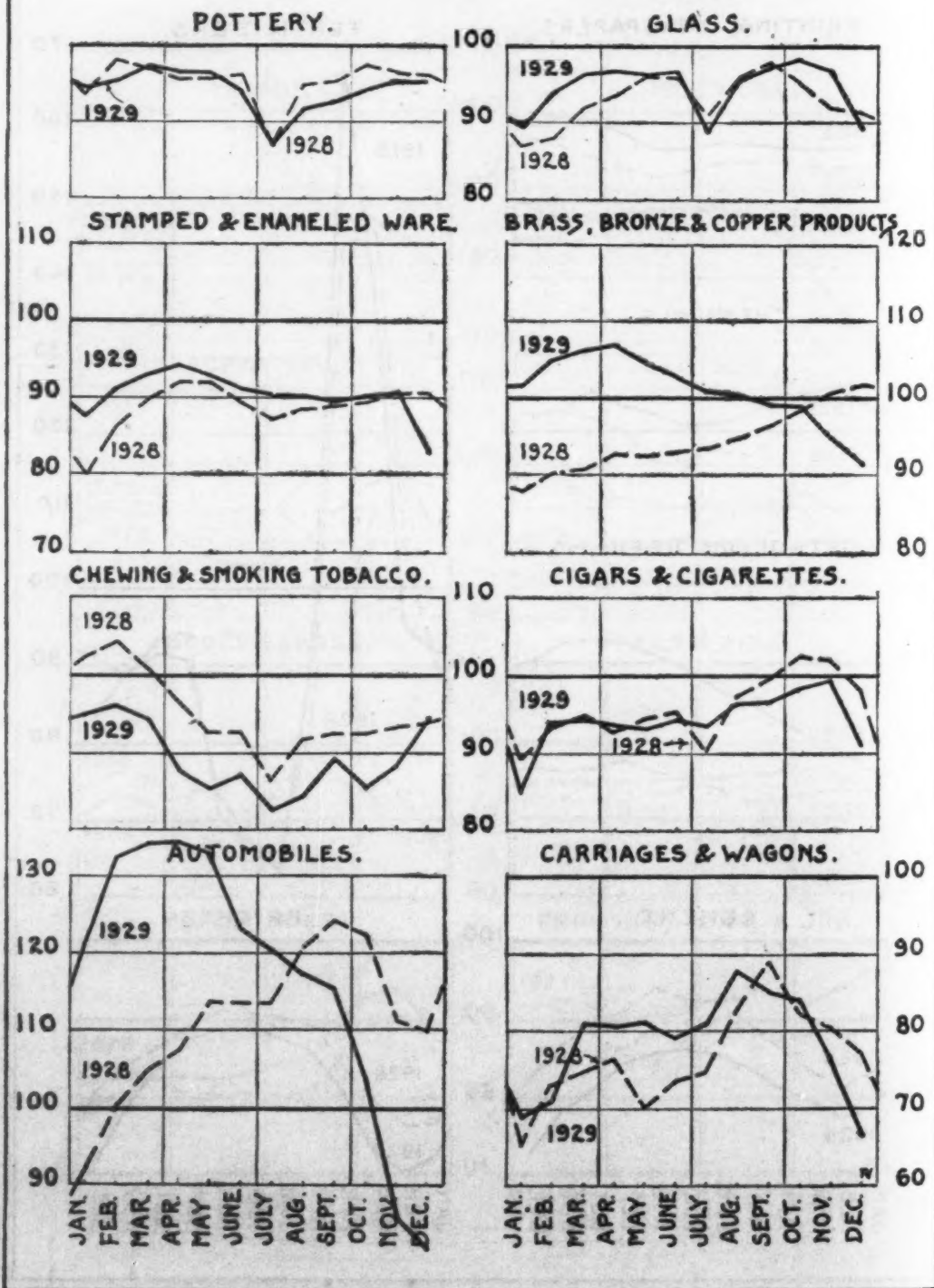


TREND OF EMPLOYMENT. (MONTHLY AVERAGE 1926 = 100.)



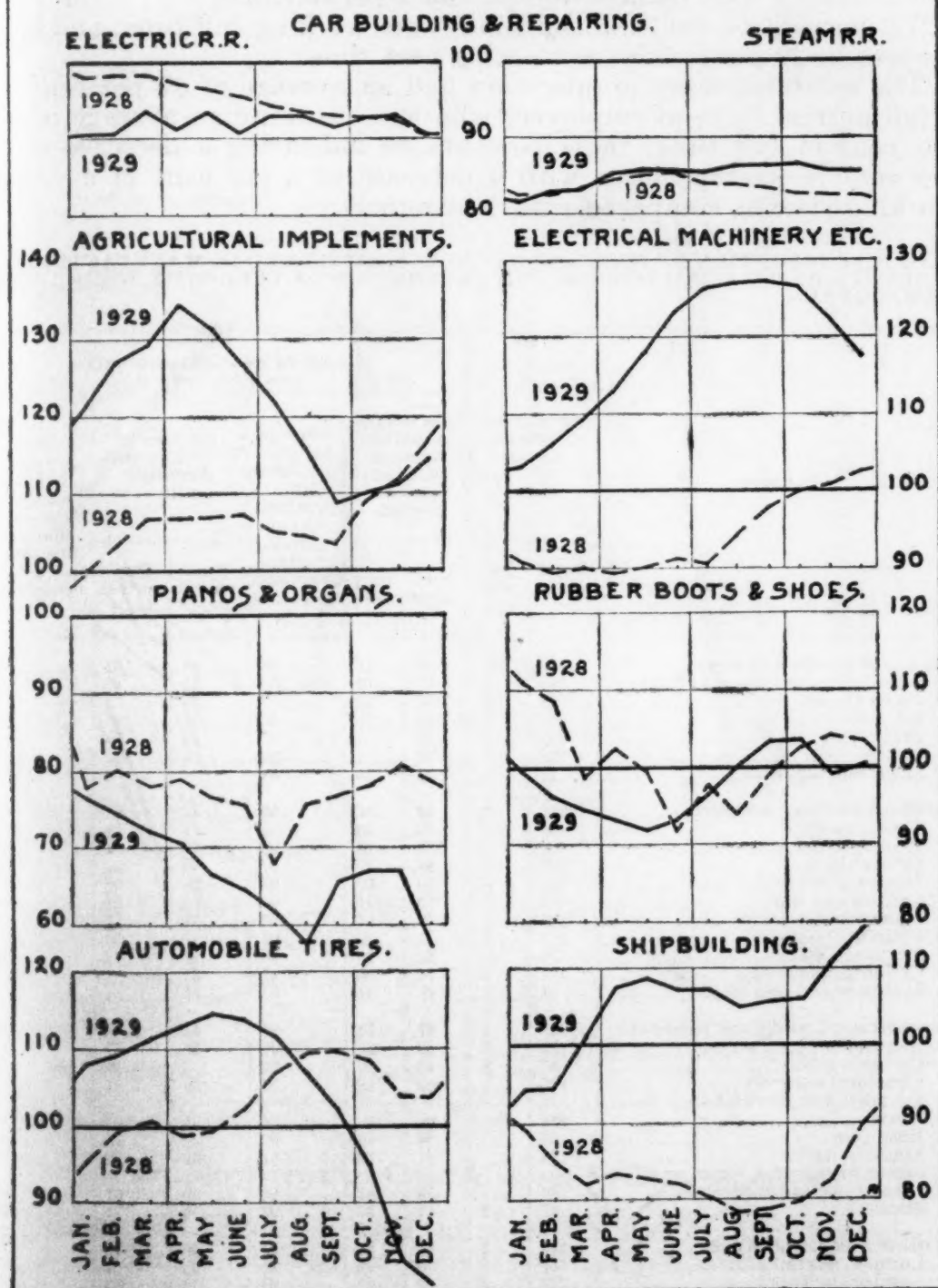
TREND OF EMPLOYMENT.

(MONTHLY AVERAGE 1926=100.)



TREND OF EMPLOYMENT.

(MONTHLY AVERAGE 1926=100)



**Force Employed and Time Worked in Manufacturing Industries in
December, 1929**

TEN THOUSAND AND TWENTY-FOUR establishments in the 54 manufacturing industries reported as to force employed in December, 1929, and as to working time of employees. Thirty-four per cent of the establishments had a full normal force of employees, 64 per cent were working with reduced forces, and 1 per cent was idle; employees in 77 per cent of the establishments were working full time, and employees in 22 per cent were working part time.

The establishments in operation had an average of 87 per cent of a full normal force of employees who were working an average of 96 per cent of full time, these percentages indicating a decrease of 2 per cent in average force with a decrease of 1 per cent in average working time as compared with November.

TABLE 8.—PROPORTION OF FULL NORMAL FORCE EMPLOYED IN MANUFACTURING INDUSTRIES IN DECEMBER, 1929, AND PROPORTION OF FULL TIME WORKED BY EMPLOYEES

Industry	Establishments reporting		Operating establishments only					
			Per cent of establishments in which employees worked—		Average per cent of full time worked by employees in establishments operating	Per cent of establishments operating with—		Average per cent of full normal force employed in establishments operating
			Full time	Part time		Full normal force	Part normal force	
Food and kindred products	1,456	(¹)	88	11	98	38	61	90
Slaughtering and meat packing	145	1	87	12	100	52	48	99
Confectionery	228	(¹)	86	14	97	24	75	82
Ice cream	202	1	80	19	97	11	88	66
Flour	285	1	83	16	97	43	56	92
Baking	584	(¹)	96	4	99	48	52	95
Sugar refining, cane	12		67	33	89	8	92	76
Textiles and their products	1,691	2	75	24	96	37	61	88
Cotton goods	435	(¹)	70	30	94	31	69	84
Hosiery and knit goods	267	1	82	16	98	45	54	96
Silk goods	247	2	81	17	97	40	57	90
Woolen and worsted goods	167	4	69	27	94	28	69	80
Carpets and rugs	22		86	14	97	36	64	104
Dyeing and finishing	106		56	44	90	33	67	85
Clothing, men's	201	3	77	19	97	47	50	87
Shirts and collars	78		82	18	98	58	42	106
Clothing, women's	114	2	78	20	97	35	63	89
Millinery and lace goods	54		76	24	98	17	83	79
Iron and steel, and their products	1,631	1	67	32	94	34	65	87
Iron and steel	173	3	62	35	91	20	77	83
Cast-iron pipe	37	8	43	49	84	5	86	69
Structural ironwork	140		82	18	99	39	61	94
Foundry and machine-shop products	924	(¹)	66	33	94	35	65	90
Hardware	50		58	42	92	24	76	81
Machine tools	138		81	19	97	61	39	115
Steam fittings and steam and hot-water heating apparatus	82		59	41	91	39	61	78
Stoves	87	2	61	37	93	26	71	87
Lumber and its products	1,175	1	66	33	94	36	73	80
Lumber, sawmills	557	1	70	29	95	25	74	80
Lumber, millwork	272	2	49	49	91	15	83	66
Furniture	346		73	27	95	36	64	87

¹ Less than one-half of 1 per cent.

TABLE 8.—PROPORTION OF FULL NORMAL FORCE EMPLOYED IN MANUFACTURING INDUSTRIES IN DECEMBER, 1929, AND PROPORTION OF FULL TIME WORKED BY EMPLOYEES—Continued

Industry	Establishments reporting		Operating establishments only					
			Per cent of establishments in which employees worked—		Average per cent of full time worked by employees in establishments operating	Per cent of establishments operating with—		Average per cent of full normal force employed in establishments operating
	Total number	Per cent idle	Full time	Part time		Full normal force	Part normal force	
Leather and its products.....	348	1	75	24	95	37	61	91
Leather.....	114		85	15	99	36	64	87
Boots and shoes.....	234	2	70	28	94	38	60	93
Paper and printing.....	858	(1)	92	8	99	57	42	99
Paper and pulp.....	137	1	79	20	97	37	61	93
Paper boxes.....	136		84	16	99	49	51	92
Printing, book and job.....	295		96	4	100	54	46	103
Printing, newspapers.....	290		98	2	100	74	26	105
Chemicals and allied products.....	276	(1)	87	12	96	26	74	83
Chemicals.....	101		91	9	99	47	53	99
Fertilizers.....	135	1	81	18	97	9	90	50
Petroleum refining.....	40		100		100	33	68	87
Stone, clay, and glass products.....	769	5	79	16	97	19	76	80
Cement.....	86	3	88	8	99	17	79	73
Brick, tile, and terra cotta.....	482	7	74	18	96	11	82	71
Pottery.....	99		78	22	95	41	59	94
Glass.....	102	1	91	8	99	33	66	88
Metal products, other than iron and steel.....	189		81	19	97	28	72	87
Stamped and enameled ware.....	61		85	15	97	34	66	88
Brass, bronze, and copper products.....	128		79	21	97	25	75	87
Tobacco products.....	178	5	69	26	97	37	58	95
Chewing and smoking tobacco and snuff.....	18		78	22	97	39	61	101
Cigars and cigarettes.....	160	6	68	26	97	36	58	94
Vehicles for land transportation.....	1,080	(1)	81	18	97	27	73	74
Automobiles.....	175		62	38	88	21	79	66
Carriages and wagons.....	46	2	59	39	94	15	83	58
Car building and repairing, electric-railroad.....	359		86	14	100	44	56	91
Car building and repairing, steam-railroad.....	500		87	13	98	18	82	83
Miscellaneous industries.....	373	1	71	28	96	41	58	100
Agricultural implements.....	71	1	65	34	96	35	63	103
Electrical machinery, apparatus, and supplies.....	148		80	20	97	49	51	106
Pianos and organs.....	52		62	38	93	21	79	75
Rubber boots and shoes.....	8	13	63	25	99	63	25	101
Automobile tires.....	34	3	41	56	92	12	85	80
Shipbuilding, steel.....	60	3	83	13	99	58	38	98
All industries.....	10,024	1	77	22	96	34	64	87

¹ Less than one-half of 1 per cent.

2. Employment in Coal Mining in December, 1929

EMPLOYMENT in coal mining—anthracite and bituminous combined—showed an increase of 1.3 per cent, and pay-roll totals increased 15.6 per cent, according to reports from 1,378 mines which had in December 329,590 employees whose combined earnings in one week were \$10,330,850.

Anthracite

IN ANTHRACITE MINING in December there was an increase of 2.9 per cent in employment and an increase of 36.5 per cent in pay-roll totals. All anthracite mines reported are in Pennsylvania—the Middle Atlantic geographic division.

The increase in earnings in December over November was due largely to steadier time operated during the period covered by the December report, a decrease of 25 per cent in employees' earnings occurring in November due to the observance of church and legal holidays during the first half of November.

The details for November and December are shown in Table 1.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL ANTHRACITE MINES IN NOVEMBER AND DECEMBER, 1929

Geographic division	Mines	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		November, 1929	December, 1929		November, 1929	December, 1929	
Middle Atlantic ¹	162	117,996	121,391	+2.9	\$3,506,875	\$4,785,556	+36.5

¹ See footnote 4, p. 174.

Bituminous Coal

EMPLOYMENT in bituminous coal mining increased 0.5 per cent in December as compared with November, while pay-roll totals increased 2.1 per cent, as shown by reports from 1,216 mines in which there were in December 208,199 employees whose combined earnings in one week were \$5,545,294.

Increases in employment were shown in six geographic divisions, slight decreases in two, the Middle-Atlantic division reporting 0.7 per cent decrease and the East South Central division showing a loss of 0.4 per cent. Substantial increases in earnings were also shown in six of the geographic divisions, the West North Central leading with a gain of 20.2 per cent, followed by the East North Central with an increase of 14.9 per cent, and the Pacific division with 12.6 per cent.

Details for each geographic division except the New England division, for which no coal mining is reported, are shown in Table 2.

TABLE 2.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL BITUMINOUS COAL MINES IN NOVEMBER AND DECEMBER, 1929

Geographic division ¹	Mines	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		November, 1929	December, 1929		November, 1929	December, 1929	
Middle Atlantic.....	389	64,424	63,974	-0.7	\$1,713,290	\$1,659,113	-3.2
East North Central.....	171	29,129	29,859	+2.5	765,856	880,117	+14.9
West North Central.....	49	5,026	5,256	+4.6	117,727	141,449	+20.2
South Atlantic.....	289	49,437	49,693	+0.5	1,306,420	1,278,352	-2.1
East South Central.....	186	40,104	39,946	-0.4	852,218	886,574	+4.0
West South Central.....	26	2,629	2,653	+0.9	70,795	74,515	+5.3
Mountain.....	96	15,047	15,300	+2.3	557,437	570,767	+2.4
Pacific.....	10	1,414	1,428	+1.0	48,307	54,407	+12.6
All divisions.....	1,216	207,210	208,199	+0.5	5,432,950	5,545,294	+2.1

¹ See footnotes 3 to 11, p. 174.

3. Employment in Metalliferous Mining in December, 1929

METALLIFEROUS mines in December showed a decrease in employment of 4.4 per cent, with a loss in pay-roll totals of 2.4 per cent. The 346 mines reporting in December had 59,554 employees whose combined earnings in one week were \$1,814,377.

Details for each geographic division from which metalliferous mining is reported are shown in the following table:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL METALLIFEROUS MINES IN NOVEMBER AND DECEMBER, 1929

Geographic division ¹	Mines	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		November, 1929	December, 1929		November, 1929	December, 1929	
Middle Atlantic.....	3	460	447	-2.8	\$13,144	\$13,714	+4.3
East North Central.....	44	13,056	13,054	-(?)	354,814	352,606	-0.6
West North Central.....	58	8,499	7,477	-12.0	246,540	214,996	-12.8
East South Central.....	11	3,683	3,583	-2.7	80,590	85,693	+6.3
West South Central.....	71	4,828	3,476	-28.0	121,369	88,454	-27.1
Mountain.....	143	30,087	29,881	-0.7	987,923	1,002,606	+1.5
Pacific.....	16	1,681	1,636	-2.7	55,271	56,308	+1.9
All divisions.....	346	62,294	59,554	-4.4	1,859,651	1,814,377	-2.4

¹ See footnotes 3 to 11 p. 174.

-(?) Less than one-tenth of 1 per cent.

4. Employment in Quarrying and Nonmetallic Mining in December, 1929

EMPLOYMENT and pay-roll totals in quarrying and non-metallic mining decreased 8.6 per cent and 11.1 per cent, respectively, in December as compared with November. The 655 establishments reporting in December had 33,660 employees whose combined earnings in one week were \$836,195.

Details for each geographic division are shown in the following table:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL QUARRIES AND NONMETALLIC MINES IN NOVEMBER AND DECEMBER, 1929

Geographic division ¹	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		November, 1929	December, 1929		November, 1929	December, 1929	
New England.....	98	5,086	4,679	-8.0	\$150,496	\$135,853	-9.7
Middle Atlantic.....	92	5,732	5,249	-8.4	156,756	132,832	-15.3
East North Central.....	205	10,113	8,908	-11.9	297,214	251,405	-15.4
West North Central.....	64	2,992	2,615	-12.6	75,401	67,892	-10.0
South Atlantic.....	92	5,539	5,665	+3.0	104,639	100,956	-3.5
East South Central.....	42	2,667	2,392	-10.3	41,872	39,134	-6.5
West South Central.....	30	2,723	2,552	-6.3	66,982	62,725	-6.4
Mountain.....	6	89	106	+19.1	1,908	2,611	+36.8
Pacific.....	26	1,574	1,494	-5.1	45,339	42,787	-5.6
All divisions.....	655	36,815	33,660	-8.6	949,597	836,195	-11.1

¹ See footnotes 3 to 11, p. 174.

5. Employment in Public Utilities in December, 1929

PUBLIC UTILITIES companies reported a decrease of 1.0 per cent in employment in December as compared with November and an increase of 1.9 per cent in pay-roll totals. The 9,463 establish-

ments covered had in December 713,110 employees, whose combined earnings in one week were \$21,514,456.

Details for each geographic division are shown in the following table:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL PUBLIC UTILITIES ESTABLISHMENTS IN NOVEMBER AND DECEMBER, 1929

Geographic division ¹	Estab- lish- ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		November, 1929	December, 1929		November, 1929	December, 1929	
New England.....	391	42, 182	41, 349	-2.0	\$1, 380, 604	\$1, 379, 586	-0.1
Middle Atlantic.....	1, 494	210, 482	208, 823	-0.8	6, 504, 202	6, 649, 152	+2.2
East North Central.....	1, 622	191, 704	189, 771	-1.0	5, 775, 098	5, 860, 684	+1.5
West North Central.....	1, 609	75, 094	75, 529	-0.2	2, 026, 760	2, 121, 440	+4.7
South Atlantic.....	837	55, 173	54, 039	-2.1	1, 508, 162	1, 523, 966	+1.0
East South Central.....	727	21, 881	21, 850	-0.1	511, 196	520, 278	+1.8
West South Central.....	1, 043	41, 863	41, 559	-0.7	1, 001, 290	1, 029, 417	+2.8
Mountain.....	581	18, 150	17, 710	-2.4	489, 489	494, 769	+1.1
Pacific.....	1, 159	63, 055	62, 480	-0.9	1, 909, 197	1, 935, 164	+1.4
All divisions.....	9, 463	770, 184	713, 110	-1.0	21, 105, 936	21, 514, 456	+1.9

¹ See footnotes 3 to 11, p. 174.

6. Employment in Wholesale and Retail Trade in December, 1929

EMPLOYMENT in 8,102 establishments—wholesale and retail trade combined—showed a gain of 14.7 per cent in December as compared with November, and an increase of 11.8 per cent was reported in pay-roll totals.

These establishments had in December 357,225 employees whose combined earnings in one week were \$8,622,630.

Wholesale Trade

EMPLOYMENT in wholesale trade alone decreased 0.4 per cent in December as compared with November, while pay-roll totals increased 2.8 per cent. Each geographic division showed a pay-roll increase, the Mountain and West North Central divisions leading with increases of 6.8 per cent and 6.0 per cent, respectively. The 1,778 establishments reporting had in December 60,275 employees and pay-roll totals of \$1,882,171.

Details for each geographic division are shown in Table 1.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL WHOLESALE TRADE ESTABLISHMENTS IN NOVEMBER AND DECEMBER, 1929

Geographic division ¹	Estab- lish- ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		November, 1929	December, 1929		November, 1929	December, 1929	
New England.....	144	2, 936	2, 999	+2.1	\$83, 218	\$83, 700	+0.6
Middle Atlantic.....	300	8, 729	8, 617	-1.3	267, 286	269, 280	+0.7
East North Central.....	232	12, 605	12, 540	-0.5	394, 306	395, 217	+0.2
West North Central.....	218	12, 689	12, 827	+1.1	358, 013	379, 324	+6.0
South Atlantic.....	271	3, 909	3, 827	-2.1	114, 685	114, 913	+0.2
East South Central.....	53	1, 834	1, 818	-0.9	53, 185	53, 350	+0.3
West South Central.....	218	5, 576	5, 575	-0.02	159, 105	165, 157	+3.8
Mountain.....	66	1, 609	1, 621	+0.7	54, 263	57, 930	+6.8
Pacific.....	276	10, 434	10, 451	+0.2	346, 448	363, 300	+4.9
All divisions.....	1, 778	60, 531	60, 275	-0.4	1, 839, 599	1, 882, 171	+2.8

¹ See footnotes 3 to 11, p. 174.

² Less than one-tenth of 1 per cent.

Retail Trade

EMPLOYMENT in retail trade in December showed an increase of 18.3 per cent, with increases in all geographic divisions, both in employment and pay-roll totals. The 6,324 establishments from which reports were received had in December 296,950 employees whose combined earnings in one week were \$6,740,459, a gain of 14.6 per cent as compared with the November pay roll. The large volume of Christmas purchasing is of course reflected in these greatly increased per cents, the Pacific division leading with an increase of 26.4 per cent in employment and 22.9 per cent in pay-roll totals.

Details by geographic divisions are shown in Table 2.

TABLE 2.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL RETAIL TRADE ESTABLISHMENTS IN NOVEMBER AND DECEMBER, 1929

Geographic division ¹	Estab- lish- ments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		November, 1929	December, 1929		November, 1929	December, 1929	
New England.....	80	13,851	16,855	+21.7	\$324,223	\$369,990	+14.1
Middle Atlantic.....	324	51,434	57,850	+12.5	1,270,640	1,450,096	+14.1
East North Central.....	2,339	82,532	96,624	+17.1	2,049,068	2,295,996	+12.1
West North Central.....	655	21,295	24,854	+16.7	448,303	497,265	+10.9
South Atlantic.....	902	21,673	26,085	+20.4	464,294	541,425	+16.6
East South Central.....	371	6,116	7,379	+20.7	120,718	134,286	+11.2
West South Central.....	114	8,243	9,452	+14.7	160,083	173,919	+8.6
Mountain.....	61	3,535	4,334	+22.6	69,302	79,267	+14.4
Pacific.....	1,478	42,328	53,517	+26.4	975,247	1,198,215	+22.9
All divisions.....	6,324	251,007	296,950	+18.3	5,881,878	6,740,459	+14.6

¹ See footnotes 3 to 11, p. 174.

7. Employment in Hotels in December, 1929

EMPLOYMENT in hotels decreased 2.3 per cent in December as compared with November, and pay-roll totals decreased 0.9 per cent. A marked increase of 4.7 per cent in employment was shown in the South Atlantic division with a pay-roll increase of 6.2 per cent marking the increased business at the southern resorts. The New England division continued to show the greatest drop in employment—4.7 per cent.

Per capita earnings, obtained by dividing the total number of employees into the total amount of pay roll, should not be interpreted as being the entire earnings of hotel employees. The pay-roll totals here reported are cash payments only, with no regard to the value of board or room furnished employees, and of course no satisfactory estimate can be made of additional recompense in the way of tips. The additions to the money wages granted vary greatly, not only among localities but among hotels in one locality and among employees in one hotel. Some employees are furnished board and room, others are given board only for one, two, or three meals, while the division of tips is made in many ways.

Per capita earnings are further reduced by the considerable amount of part-time employment in hotels caused by conventions and banquets or other functions.

The details for each geographic division are shown in the table following:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL HOTELS IN NOVEMBER AND DECEMBER, 1929

Geographic division ¹	Hotels	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		November, 1929	December, 1929		November, 1929	December, 1929	
New England.....	103	9,563	9,117	-4.7	\$151,809	\$148,239	-2.4
Middle Atlantic.....	312	44,115	42,556	-3.5	777,866	772,437	-0.7
East North Central.....	348	34,131	33,182	-2.8	610,186	594,852	-2.5
West North Central.....	213	14,041	13,450	-4.2	207,359	204,475	-1.4
South Atlantic.....	181	12,272	12,852	+4.7	183,586	195,039	+6.2
East South Central.....	69	6,253	6,249	-0.1	80,990	81,040	+0.1
West South Central.....	97	7,725	7,754	+0.4	104,998	104,107	-0.8
Mountain.....	100	3,529	3,403	-3.6	59,709	59,555	-0.4
Pacific.....	361	17,823	17,478	-1.9	347,676	340,552	-2.0
All divisions.....	1,784	149,452	146,041	-2.3	2,524,248	2,500,796	-0.9

¹ See footnotes 3 to 11, p. 174.

8. Employment in Canning and Preserving in December, 1929

THE seasonal decrease in canning and preserving was shown in December by a per cent of 35.5 for employment and a pay-roll loss of 30.8 per cent. Four hundred and fifty-seven establishments reported a total of 23,537 employees, whose combined earnings in one week were \$440,271.

The details for each geographic division are shown in the following table:

COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL CANNING AND PRESERVING ESTABLISHMENTS IN NOVEMBER AND DECEMBER, 1929

Geographic division ¹	Establishments	Number on pay roll		Per cent of change	Amount of pay roll (1 week)		Per cent of change
		November, 1929	December, 1929		November, 1929	December, 1929	
New England.....	25	1,727	886	-48.7	\$24,499	\$16,333	-33.3
Middle Atlantic.....	63	9,340	7,483	-19.9	191,568	158,850	-17.1
East North Central.....	109	4,694	3,244	-30.9	86,567	61,784	-28.6
West North Central.....	31	1,069	707	-33.9	16,858	13,829	-18.0
South Atlantic.....	33	2,052	1,378	-32.8	22,674	13,382	-41.0
East South Central.....	23	758	654	-13.7	7,579	7,790	+2.8
West South Central.....	9	224	112	-50.0	2,108	2,055	-2.5
Mountain.....	25	1,372	975	-28.9	29,452	19,989	-32.1
Pacific.....	139	15,254	8,098	-46.9	255,055	146,259	-42.7
All divisions.....	457	36,490	23,537	-35.5	636,360	440,271	-30.8

¹ See footnotes 3 to 11, p. 174.

Employment on Class I Steam Railroads in the United States

THE monthly trend of employment from January, 1923, to November, 1929, on Class I railroads—that is, all roads having operating revenues of \$1,000,000 or over—is shown by the index numbers published in Table 1. These index numbers are constructed from monthly reports of the Interstate Commerce Commission, using the monthly average for 1926 as 100.

TABLE 1.—INDEX OF EMPLOYMENT ON CLASS I STEAM RAILROADS IN THE UNITED STATES, JANUARY, 1923, TO NOVEMBER, 1929

[Monthly average, 1926=100]

Month	1923	1924	1925	1926	1927	1928	1929
January.....	98.3	96.9	95.6	95.8	95.5	89.3	88.2
February.....	98.6	97.0	95.4	96.0	95.3	89.0	88.9
March.....	100.5	97.4	95.2	96.7	95.8	89.9	90.1
April.....	102.0	98.9	96.6	98.9	97.4	91.7	92.2
May.....	105.0	99.2	97.8	100.2	99.4	94.5	94.9
June.....	107.1	98.0	98.6	101.6	100.9	95.9	96.1
July.....	108.2	98.1	99.4	102.9	101.0	95.6	96.6
August.....	109.4	99.0	99.7	102.7	99.5	95.7	97.4
September.....	107.8	99.7	99.9	102.8	99.1	95.3	96.8
October.....	107.3	100.8	100.7	103.4	98.9	95.3	96.9
November.....	105.2	99.0	99.1	101.2	95.7	92.9	93.0
December.....	99.4	96.0	97.1	98.2	91.9	89.7	-----
Average.....	104.1	98.3	97.9	100.0	97.5	92.9	93.7

1 Average for 11 months.

Table 2 shows the total number of employees on the 15th day each of November, 1928, and October and November, 1929, and pay-roll totals for the entire months considered.

In these tabulations data for the occupational group reported as "executives, officials, and staff assistants" are omitted.

TABLE 2.—EMPLOYMENT AND EARNINGS OF RAILROAD EMPLOYEES, NOVEMBER, 1928, AND OCTOBER AND NOVEMBER, 1929

[From monthly reports of Interstate Commerce Commission. As data for only the more important occupations are shown separately, the group totals are not the sum of the items under the respective groups]

Occupation	Number of employees at middle of month			Total earnings		
	November, 1928	October, 1929	November, 1929	November, 1928	October, 1929	November, 1929
Professional, clerical, and general	270,693	272,941	271,833	\$29,015,113	\$40,709,515	\$39,636,902
Clerks.....	154,975	155,147	153,942	21,152,629	22,085,797	21,230,437
Stenographers and typists.....	24,673	24,818	24,864	3,177,774	3,292,332	3,236,803
Maintenance of way and structures	393,552	453,681	400,689	35,919,554	44,182,951	37,053,448
Laborers, extra gang and work train.....	57,615	81,638	64,437	4,210,502	6,707,698	4,723,631
Laborers, track, and roadway section.....	202,393	228,267	198,321	14,150,537	17,441,311	13,889,279
Maintenance of equipment and stores	459,415	458,844	456,271	60,859,219	67,407,210	62,688,174
Carmen.....	100,880	101,585	100,443	15,092,082	17,221,723	15,747,021
Machinists.....	55,153	54,836	54,532	8,748,538	9,851,455	9,063,188
Skilled trades helpers.....	101,175	102,243	101,580	11,398,392	13,035,641	12,011,683
Laborers (shops, engine houses, power plants, and stores).....	37,626	37,383	37,269	3,500,880	3,722,157	3,572,771
Common laborers (shops, engine houses, power plants, and stores).....	52,449	52,634	52,350	4,211,027	4,555,917	4,204,204
Transportation, other than train, engine and yard	197,899	200,489	195,597	24,664,494	26,128,121	24,491,163
Station agents.....	29,663	29,253	29,106	4,677,226	4,821,716	4,632,357
Telegraphers, telephoners, and towermen.....	23,235	23,351	23,143	3,554,390	3,731,061	3,554,501
Truckers (stations, warehouses, and platforms).....	35,773	36,849	34,748	3,397,179	3,766,873	3,277,155
Crossing and bridge flagmen and gatemen.....	20,852	20,470	20,380	1,604,085	1,595,565	1,574,541
Transportation (yardmasters, switch tenders, and hostlers)	21,861	21,945	21,765	4,301,398	4,406,704	4,379,696
Transportation, train and engine	339,188	325,958	317,868	65,619,791	72,782,614	64,592,904
Road conductors.....	35,900	36,689	35,435	8,573,257	9,604,812	8,518,187
Road brakemen and flagmen.....	71,648	72,221	70,035	12,529,318	14,123,331	12,292,893
Yard brakemen and yard helpers.....	54,120	55,542	54,787	9,867,022	10,800,526	9,717,161
Road engineers and motormen.....	42,794	43,434	42,170	11,743,211	13,028,731	11,467,077
Road firemen and helpers.....	43,506	43,693	42,483	8,666,809	9,583,407	8,421,804
All employees.....	1,663,686	1,732,858	1,664,923	\$39,379,549	\$55,617,115	\$32,741,287

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—
Continued

Monthly period—Continued

State, and industry group	Per cent of change, October to No- vember, 1929		State, and industry group	Per cent of change, November to De- cember, 1929	
	Employ- ment	Pay roll		Employ- ment	Pay roll
New Jersey			Oklahoma—Continued		
Food and kindred products.....	-12.4	-7.8	Printing: Job work.....	+1.0	-2.7
Textiles and their products.....	-1.0	-2.9	Public utilities:		
Iron and steel and their products.....	-.3	+9	Steam-railway shops.....	+2.5	+4.4
Lumber and its products.....	+2.4	-.1	Street railways.....	+1.2	-2.6
Leather and its products.....	-1.3	-7.3	Water, light, and power.....	-21.8	-21.1
Tobacco products.....	+6.8	+5.2	Stone, clay, and glass:		
Paper and printing.....	+3.2	+5.9	Brick and tile.....	-13.9	-16.7
Chemicals and allied prod- ucts.....	-1.5	-1.8	Cement and plaster.....	-5.0	-11.4
Stone, clay, and glass prod- ucts.....	+7	-3.0	Crushed stone.....	-19.6	-7.1
Metal products other than iron and steel.....	-1.3	-4.5	Glass manufacture.....	-6.3	-12.4
Vehicles for land transpor- tation.....	-3.1	-4.9	Textiles and cleaning:		
Miscellaneous.....	-13.8	-20.0	Textile manufacture.....	-14.8	+4
All industries.....	-3.2	-4.5	Laundries, etc.....	-3.6	-2.3
New York			Woodworking:		
Stone, clay, and glass.....	-2.2	-3.6	Saw mills.....	-.4	-8.9
Metals and machinery.....	-2.6	-4.2	Millwork, etc.....	-13.1	-7.3
Wood manufactures.....	-2.7	-6.1	All industries.....	-9.0	-9.4
Furs, leather, and rubber goods.....	-3.3	-11.5	Index numbers (1923- 1925=100)—employ- ment		
Chemicals, oils, paints, etc.....	-.1	+3			
Paper.....	+1.5	+2.3	November, 1929	December, 1929	
Printing and paper goods.....	-.4	+1.2	Pennsylvania		
Textiles.....	-.1	-1.0	Metal products.....	99.1	96.1
Clothing and millinery.....	-3.9	-9.2	Transportation equipment.....	77.5	79.3
Food and tobacco.....	-4.9	-3.8	Textile products.....	104.7	101.8
Water, light and power.....	-.8	-.4	Foods and tobacco.....	104.7	101.9
All industries.....	-2.3	-4.1	Stone, clay, and glass prod- ucts.....	83.3	76.9
November to Decem- ber, 1929			Lumber products.....	78.4	76.2
			Chemical products.....	106.3	106.0
Oklahoma			Leather and rubber prod- ucts.....	104.9	102.5
Cottonseed-oil mills.....	+7	+3.3	Paper and printing.....	97.7	97.9
Food production:			All manufacturing.....	95.2	92.8
Bakeries.....	-7.0	-8.9	Pay roll		
Confections.....	-22.7	-17.4			
Creameries and dairies.....	+1.0	-5.7	Metal products.....	104.3	97.4
Flour mills.....	-2.6	-9.1	Transportation equipment.....	77.1	79.5
Ice and ice cream.....	-15.2	-10.7	Textile products.....	112.9	109.5
Meat and poultry.....	-9.9	-11.1	Foods and tobacco.....	105.2	105.8
Lead and zinc:			Stone, clay, and glass prod- ucts.....	82.5	72.6
Mines and mills.....	-16.2	-19.6	Lumber products.....	83.3	76.6
Smelters.....	-31.2	-33.6	Chemical products.....	115.4	111.4
Metals and machinery:			Leather and rubber prod- ucts.....	107.1	108.2
Auto repairs, etc.....	-14.2	-13.2	Paper and printing.....	114.7	112.2
Machine shops and foundries.....	-6.6	-6.3	All manufacturing.....	100.2	95.6
Tank construction and erection.....	-7.9	-8.7			
Oil industry:					
Producing and gaso- line manufacture.....	-3.3	-1.1			
Refineries.....	-1.7	-3.3			

¹ Preliminary figures.

PER CENT OF CHANGE IN EMPLOYMENT AND PAY ROLLS IN SPECIFIED STATES—
Continued

Monthly period—Continued

State, and industry group	Per cent of change, October to No- vember, 1929		State, and industry group	Per cent of change, October to No- vember, 1929	
	Employ- ment	Pay roll		Employ- ment	Pay roll
Wisconsin			Wisconsin—Continued		
Manual			Manual—Continued		
Logging.....	+24.6	+31.7	Communication:		
Mining:			Steam railways.....	-7.3	-7.3
Lead and zinc.....	-5.7	-4.4	Electric railways.....	-2	-1.8
Iron.....	-1.2	+2.8	Express, telephone, and telegraph.....	+2.3	+6.8
Stone crushing and quarry- ing.....	+6.9	+7.6	Light and power.....	+3.7	+1.8
Manufacturing:			Wholesale trade.....	-4.1	-2.6
Stone and allied indus- tries.....	-9.7	-4.4	Hotels and restaurants.....	-4.7	-----
Metal.....	-4.6	-7.9	Laundry and dyeing.....	+1.6	+1.3
Wood.....	-1.7	-2.5			
Rubber.....	-10.5	-8.1	Nonmanual		
Leather.....	-5.6	-13.7	Manufacturing, mines, and quarries.....	+2	.0
Paper.....	+1.1	+1.6	Construction.....	.0	-.5
Textiles.....	-2.2	+1.3	Communication.....	+7	+2.0
Foods.....	-3.9	-4.8	Wholesale trade.....	-9	-.8
Printing and publishing.....	+2.4	+8	Retail trade—sales force only.....	+2.9	+2.3
Chemicals (including soap, glue, and explo- sives).....	-2.7	-1.6	Miscellaneous professional services.....	-2.4	-5.8
All manufacturing.....	-3.5	-5.3			
Construction:					
Building.....	-2.2	+4.5			
Highway.....	-14.1	-16.6			
Railroad.....	-8.7	-9.8			
Marine, dredging, sewer digging.....	-15.5	-6.6			

Yearly period

State, and industry group	Per cent of change, November, 1928, to November, 1929		State, and industry group	Employment — in- dex numbers (1925- 1927 = 100)	
	Employ- ment	Pay roll		Novem- ber, 1928	November, 1929
California			Illinois		
Stone, clay, and glass prod- ucts.....	+3.7	+3.7	Stone, clay, and glass prod- ucts.....	96.3	86.9
Metals, machinery, and conveyances.....	+11.4	+11.7	Metals, machinery, and conveyances.....	103.9	112.5
Wood manufactures.....	-7.9	-3.0	Wood products.....	81.3	76.7
Leather and rubber goods.....	-24.0	-20.5	Furs and leather goods.....	88.5	99.1
Chemicals, oils, paints, etc.....	+2.2	+1.5	Chemicals, oils, paints, etc.....	90.6	99.7
Printing and paper goods.....	+6.0	+5.6	Printing and paper goods.....	103.0	108.2
Textiles.....	-3.7	-4.0	Textiles.....	93.7	98.9
Clothing, millinery, and laundering.....	+1.4	+9	Clothing and millinery.....	82.4	83.7
Foods, beverages, and to- bacco.....	+4.7	+5.6	Food, beverages, and to- bacco.....	95.2	95.5
Water, light, and power.....	+25.0	+27.8	All manufacturing.....	98.3	102.7
Miscellaneous.....	+45.4	+54.4	Trade, wholesale and retail.....	88.9	92.3
All industries.....	+5.2	+6.5	Public utilities.....	102.7	107.2
			Coal mining.....	81.2	78.9
			Building and contracting.....	107.2	91.3
			All industries.....	98.6	101.9

Yearly period—Continued

¹ Preliminary figures.

WHOLESALE AND RETAIL PRICES

Retail Prices of Food in the United States

THE following tables are compiled from monthly reports of actual selling prices¹ received by the Bureau of Labor Statistics from retail dealers.

Table 1 shows for the United States retail prices of food, December 15, 1928, November 15 and December 15, 1929, as well as the percentage changes in the year and in the month. For example the retail price per pound of pork chops was 31.3 cents on December 15, 1928; 35.8 cents on November 15, 1929; and 34.3 cents on December 15, 1929. These figures show an increase of 10 per cent in the year and a decrease of 4 per cent in the month.

The cost of various articles of food combined shows an increase of 1.4 per cent December 15, 1929, as compared with December 15, 1928, and a decrease of 1.0 per cent December 15, 1929, as compared with November 15, 1929.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE DECEMBER 15, 1929, COMPARED WITH NOVEMBER 15, 1929, AND DECEMBER 15, 1928

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers]

Article	Unit	Average retail prices on—			Per cent of increase (+) or decrease (—) Dec. 15, 1929, compared with—	
		Dec. 15, 1928	Nov. 15, 1929	Dec. 15, 1929	Dec. 15, 1928	Nov. 15, 1929
Sirloin steak.....	Pound.....	48.2	49.3	48.9	+1	-1
Round steak.....	do.....	42.7	43.8	43.4	+2	-1
Rib roast.....	do.....	35.7	36.3	36.0	+1	-1
Chuck roast.....	do.....	29.1	29.4	29.3	+1	-0.3
Plate beef.....	do.....	20.4	20.7	20.6	+1	-0.4
Pork chops.....	do.....	31.3	35.8	34.3	+10	-4
Bacon, sliced.....	do.....	43.3	43.0	42.5	-2	-1
Ham, sliced.....	do.....	53.4	53.9	53.4	0	-1
Lamb, leg of.....	do.....	37.6	37.9	37.9	+1	0
Hens.....	do.....	37.9	37.7	37.1	-2	-2
Salmon, canned.....	do.....	31.9	31.9	32.2	+1	+1
Milk, fresh.....	Quart.....	14.3	14.4	14.4	+1	0
Milk, evaporated.....	16-oz can.....	11.4	10.5	10.4	-9	-1
Butter.....	Pound.....	50.3	53.5	51.6	-13	-4
Oleomargarine (all butter substitutes).....	do.....	27.5	26.9	26.7	-3	-1
Cheese.....	do.....	38.5	37.8	37.7	-2	-0.3
Lard.....	do.....	18.7	18.0	17.6	-6	-2
Vegetable lard substitute.....	do.....	24.8	24.6	24.4	-2	-1
Eggs, strictly fresh.....	D dozen.....	58.4	63.3	62.8	+8	-1
Bread.....	Pound.....	9.0	8.9	8.9	-1	0

¹ In addition to monthly retail prices of food and coal, the bureau publishes periodically the prices of gas and electricity for household use in each of 51 cities. At present this information is being collected in June and December of each year.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE DECEMBER 15, 1929, COMPARED WITH NOVEMBER 15, 1929, AND DECEMBER 15, 1928—Continued

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers]

Article	Unit	Average retail prices on—			Per cent of increase (+) or decrease (−) Dec. 15, 1929, compared with—	
		Dec. 15, 1928	Nov. 15, 1929	Dec. 15, 1929	Dec. 15, 1928	Nov. 15, 1929
Flour.....	Pound.....	5.1	5.2	5.1	0	−2
Corn meal.....	do.....	5.3	5.3	5.4	+2	+2
Rolled oats.....	do.....	8.9	8.8	8.8	−1	0
Corn flakes.....	8-oz. package.....	9.5	9.5	9.5	0	0
Wheat cereal.....	28-oz. package.....	25.5	25.5	25.5	0	0
Macaroni.....	Pound.....	19.7	19.7	19.6	−1	−1
Rice.....	do.....	9.9	9.7	9.6	−3	−1
Beans, navy.....	do.....	12.8	13.7	13.1	+2	−4
Potatoes.....	do.....	2.2	3.8	3.8	+73	0
Onions.....	do.....	7.1	5.0	5.0	−30	0
Cabbage.....	do.....	4.7	4.2	4.4	−6	+5
Beans, baked.....	No. 2 can.....	11.7	11.7	11.5	−2	−2
Corn, canned.....	do.....	15.9	15.7	15.7	−1	0
Peas, canned.....	do.....	16.7	16.6	16.5	−1	−1
Tomatoes, canned.....	do.....	12.0	12.6	12.5	+4	−1
Sugar.....	Pound.....	6.7	6.7	6.6	−1	−1
Tea.....	do.....	77.3	77.4	77.7	+1	+0.4
Coffee.....	do.....	49.7	48.3	46.3	−7	−4
Prunes.....	do.....	14.1	17.9	18.2	+29	+2
Raisins.....	do.....	11.8	12.4	12.3	+4	−1
Bananas.....	Dozen.....	33.5	32.7	32.2	−4	−2
Oranges.....	do.....	47.6	43.0	43.5	−9	+1
Weighted food index.....	+1.4	−1.0

Table 2 shows for the United States average retail prices of specified food articles on December 15, 1913, and on December 15 of each year from 1923 to 1929, together with percentage changes in December of each of these specified years, compared with December, 1913. For example, the retail price per pound of lard was 15.8 cents in December, 1913; 18.9 cents in December, 1923; 22.1 cents in December, 1924; 22.6 cents in December, 1925; 20.4 cents in December, 1926; 19.2 cents in December, 1927; 18.7 cents in December, 1928; and 17.6 cents in December, 1929.

As compared with November, 1913, these figures show increases of 20 per cent in December, 1923; 40 per cent in December, 1924; 43 per cent in December, 1925; 29 per cent in December, 1926; 22 per cent in December, 1927; 18 per cent in December, 1928; and 11 per cent in December, 1929.

The cost of the various articles of food combined showed an increase of 52.0 per cent in December, 1929, as compared with December, 1913.

TABLE 2.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE DECEMBER 15 OF CERTAIN SPECIFIED YEARS COMPARED WITH DECEMBER 15, 1913

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers]

Article	Average retail price on Dec. 15—								Per cent of increase Dec. 15 of each specified year compared with Dec. 15, 1913							
	1913	1923	1924	1925	1926	1927	1928	1929	1923	1924	1925	1926	1927	1928	1929	
Sirloin steak.....pound.	Cts. 25.1	Cts. 38.6	Cts. 38.2	Cts. 40.3	Cts. 40.7	Cts. 43.9	Cts. 48.2	Cts. 48.9	54	52	61	62	75	92	95	
Round steak.....do.	22.6	32.9	32.4	34.4	35.3	38.2	42.7	43.4	46	43	52	56	69	89	92	
Rib roast.....do.	19.9	28.3	28.0	29.6	30.2	32.4	35.7	36.0	42	41	49	52	63	79	81	
Chuck roast.....do.	16.2	20.4	20.2	21.7	22.7	25.1	29.1	29.3	26	25	34	40	55	80	81	
Plate beef.....do.	12.4	13.0	13.1	14.1	14.9	16.7	20.4	20.6	5	6	14	20	35	65	66	
Pork chops.....do.	20.3	26.5	29.3	35.7	37.2	32.8	31.3	34.3	31	44	76	83	62	54	69	
Bacon, sliced.....do.	26.7	37.5	39.9	48.6	49.6	45.3	43.3	42.5	40	49	82	86	70	62	59	
Ham, sliced.....do.	26.5	44.7	46.6	53.7	57.1	51.9	53.4	53.4	69	76	100	115	96	102	102	
Lamb, leg of.....do.	18.5	35.5	35.4	38.5	37.7	37.5	37.6	37.9	92	91	108	104	103	103	105	
Hens.....do.	20.8	33.4	34.4	36.5	37.2	35.7	37.9	37.1	61	65	75	79	72	82	78	
Salmon, canned, red pound.		31.3	31.8	36.9	34.1	35.0	31.9	32.2								
Milk, fresh.....quart.	9.1	14.3	13.8	14.3	14.2	14.3	14.3	14.4	57	52	57	56	57	57	58	
Milk, evaporated 16-ounce can.		12.2	11.0	11.6	11.4	11.5	11.4	10.4								
Butter.....pound.	39.7	60.3	52.5	58.6	59.3	58.4	50.3	51.6	52	32	48	49	47	49	30	
Oleomargarine (all butter substitutes) pound.		29.5	30.3	31.3	29.6	27.9	27.5	26.7								
Cheese.....do.	22.5	37.7	34.9	37.5	37.4	39.0	38.5	37.7	68	55	67	66	73	71	68	
Lard.....do.	15.8	18.9	22.1	22.6	20.4	19.2	18.7	17.6	20	40	43	29	22	18	11	
Vegetable lard substitute.....pound.		24.0	25.5	25.7	25.4	25.2	24.8	24.4								
Eggs, strictly fresh dozen.	47.6	64.9	69.8	66.2	65.2	59.6	58.4	62.8	36	47	39	37	25	23	32	
Bread.....pound.	5.6	8.7	8.9	9.4	9.4	9.2	9.0	8.9	55	59	68	68	64	61	59	
Flour.....do.	3.3	4.5	5.6	6.1	5.6	5.4	5.1	5.1	36	70	85	70	64	55	55	
Corn meal.....do.	3.1	4.4	5.2	5.2	5.1	5.2	5.3	5.4	42	68	68	65	68	71	74	
Rolled oats.....do.		8.8	9.0	9.1	9.1	9.0	8.9	8.8								
Corn flakes 8-ounce package.		9.7	10.8	11.0	10.9	9.7	9.5	9.5								
Wheat cereal 28-ounce package.		24.3	24.4	25.3	25.4	25.5	25.5	25.5								
Macaroni.....pound.		19.6	19.8	20.4	20.2	20.0	19.7	19.6								
Rice.....do.	8.7	9.7	10.6	11.4	11.2	10.3	9.9	9.6	11	2	31	29	18	14	10	
Beans, navy.....do.		10.3	10.1	9.8	9.3	9.5	12.8	13.1								
Potatoes.....do.	1.8	2.6	2.3	5.2	4.0	3.0	2.2	3.8	44	28	189	122	67	22	111	
Onions.....do.		6.0	5.3	5.7	5.0	4.7	7.1	5.0								
Cabbage.....do.		4.1	4.0	4.6	4.2	3.8	4.7	4.4								
Beans, baked No. 2 can.		12.9	12.6	12.3	11.7	11.4	11.7	11.5								
Corn, canned.....do.		15.6	17.1	16.9	16.2	15.7	15.9	15.7								
Peas, canned.....do.		17.7	18.4	17.9	17.3	16.7	16.7	16.5								
Tomatoes, canned No. 2 can.		12.9	13.7	12.7	12.2	11.8	12.0	12.5								
Sugar, granulated pound.	5.4	10.4	8.8	6.7	7.3	7.1	6.7	6.6	93	63	24	35	31	24	22	
Tea.....do.	54.5	70.2	73.8	75.8	76.9	77.3	77.3	77.7	29	35	39	41	42	42	43	
Coffee.....do.	29.7	37.8	50.5	51.3	50.7	48.1	49.7	46.3	27	70	73	71	62	67	56	
Prunes.....do.		17.8	17.3	17.1	16.2	13.8	14.1	18.2								
Raisins.....do.		16.0	14.6	14.4	14.4	13.7	11.8	12.3								
Bananas.....dozen.		39.1	36.9	35.5	34.9	34.8	33.5	32.2								
Oranges.....do.		41.5	43.2	48.9	49.3	52.3	47.6	43.5								
All articles combined ¹									44.5	45.7	59.2	55.7	50.0	49.9	52.0	

¹ Beginning with January, 1921, index numbers showing the trend in the retail cost of food have been composed of the articles shown in Tables 1 and 2, weighted according to the consumption of the average family. From January, 1913, to December, 1920, the index numbers included the following articles: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, lard, hens, flour, corn meal, eggs, butter, milk, bread, potatoes, sugar, cheese, rice, coffee, and tea.

Table 3 shows for the United States average retail prices of specified articles of food for the years 1913 and 1929 and for each month of 1929.

TABLE 3.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES IN THE UNITED STATES, BY YEARS 1913 AND 1929 AND BY MONTHS FOR 1929

Article	Unit	Average for year 1913	1929												Average for year 1929
			Jan. 15	Feb. 15	Mar. 15	Apr. 15	May 15	June 15	July 15	Aug. 15	Sept. 15	Oct. 15	Nov. 15	Dec. 15	
Sirloin steak	Pound	Cts. 25.4	Cts. 48.4	Cts. 47.8	Cts. 47.9	Cts. 49.0	Cts. 50.4	Cts. 51.2	Cts. 52.5	Cts. 52.4	Cts. 51.5	Cts. 50.3	Cts. 49.3	Cts. 48.9	Cts. 50.0
Round steak	do	22.3	42.6	42.1	42.2	43.4	44.9	45.8	47.0	47.0	46.1	44.5	43.8	43.4	44.4
Rib roast	do	19.8	35.8	35.4	35.5	36.4	37.2	37.6	38.2	38.0	37.5	37.0	36.3	36.0	36.7
Chuck roast	do	16.0	29.0	28.7	28.8	29.5	30.4	30.7	31.3	31.1	30.7	30.0	29.4	29.3	29.9
Plate beef	do	12.1	20.6	20.3	20.3	20.6	21.1	21.3	21.5	21.3	21.2	21.0	20.7	20.6	20.9
Pork chops	do	21.0	32.3	33.0	35.2	37.1	37.7	37.6	39.5	40.4	40.7	38.9	35.8	34.3	36.9
Bacon, sliced	do	27.0	43.0	42.7	42.9	43.3	43.4	43.8	44.3	44.7	44.4	43.7	43.0	42.5	43.5
Ham, sliced	do	26.9	53.8	53.7	54.3	54.7	55.1	55.3	56.4	56.8	56.4	55.1	53.9	53.4	54.9
Lamb, leg of	do	18.9	39.9	40.3	40.9	41.8	42.1	41.2	41.1	40.3	39.5	38.5	37.9	37.9	40.1
Hens	do	21.3	39.2	39.7	40.5	41.8	42.2	41.3	39.9	39.4	39.2	38.4	37.7	37.1	39.7
Salmon, canned, red.	do		31.9	31.7	31.4	31.5	31.3	31.4	31.5	31.7	31.8	31.9	31.9	32.2	31.7
Milk, fresh	Quart.	8.9	14.3	14.3	14.3	14.2	14.2	14.2	14.3	14.3	14.3	14.4	14.4	14.4	14.3
Milk, evaporated	(1) do		11.4	11.4	11.4	11.1	10.9	10.9	10.9	10.8	10.7	10.6	10.5	10.4	10.9
Butter	Pound	38.3	57.7	58.5	58.4	55.8	54.5	53.8	53.4	53.8	54.8	55.7	53.5	51.6	55.1
Oleomargarine (all butter substitutes).	do		27.6	27.6	27.5	27.4	27.3	27.2	27.2	27.1	27.1	27.0	26.9	26.7	27.2
Cheese	do	22.1	38.4	38.2	38.2	38.1	38.0	38.0	37.9	37.8	38.0	37.9	37.8	37.7	38.0
Lard	do	15.8	18.5	18.4	18.4	18.5	18.4	18.3	18.3	18.4	18.5	18.3	18.0	17.6	18.3
Vegetable lard substitute.	do		24.7	24.7	24.8	24.8	24.9	24.8	24.8	24.8	24.7	24.7	24.6	24.4	24.7
Eggs, strictly fresh	Dozen	34.5	50.6	49.1	42.1	36.7	38.7	41.4	44.1	48.3	53.0	58.0	63.3	62.8	49.0
Bread	Pound	5.6	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	8.9	8.9	8.9	9.0
Flour	do	3.3	5.1	5.1	5.1	5.1	5.0	4.9	5.0	5.2	5.3	5.2	5.2	5.1	5.1
Corn meal	do	3.0	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.4	5.3
Rollod oats	do		8.9	8.9	8.9	8.9	8.9	8.9	8.8	8.9	8.9	8.8	8.8	8.8	8.9
Corn flakes	(2)		9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5
Wheat cereal	(3)		25.5	25.5	25.5	25.5	25.5	25.4	25.5	25.5	25.5	25.5	25.5	25.5	25.5
Macaroni	Pound		19.7	19.6	19.6	19.6	19.7	19.7	19.7	19.7	19.6	19.7	19.7	19.6	19.7
Rice	do	8.7	9.8	9.8	9.8	9.8	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.6	9.7
Beans, navy	do		13.2	13.8	14.0	14.2	14.2	14.2	14.3	14.4	14.5	14.2	13.7	13.1	14.0
Potatoes	do	1.7	2.3	2.3	2.3	2.3	2.7	3.1	3.9	4.0	3.9	3.8	3.8	3.8	3.2
Onions	do		7.6	8.2	8.4	8.2	7.4	7.0	7.0	6.4	5.7	5.3	5.0	5.0	6.8
Cabbage	do		5.8	5.9	5.7	5.2	5.2	4.8	4.8	5.6	5.1	4.5	4.2	4.4	5.1
Beans, baked	(4)		11.7	11.8	11.9	11.9	11.9	11.9	11.9	11.9	11.8	11.7	11.7	11.5	11.8
Corn, canned	(4)		16.0	15.9	15.9	15.8	15.9	15.8	15.8	15.8	15.8	15.8	15.7	15.7	15.8
Peas, canned	(4)		16.8	16.7	16.7	16.7	16.7	16.6	16.6	16.6	16.6	16.7	16.6	16.5	16.7
Tomatoes, canned	(4)		12.3	12.7	13.0	13.1	13.2	13.4	13.8	13.8	12.9	12.6	12.6	12.5	13.0
Sugar, granulated	Pound	5.5	6.7	6.6	6.5	6.4	6.4	6.4	6.4	6.6	6.7	6.7	6.7	6.6	6.6
Tea	do	54.4	77.5	77.6	77.6	77.6	77.6	77.5	77.4	77.5	77.6	77.6	77.4	77.7	77.6
Coffee	do	29.8	49.5	49.5	49.6	49.6	49.5	49.4	49.4	49.3	49.2	49.1	48.3	46.3	49.1
Prunes	do		14.2	14.2	14.3	14.3	14.4	14.6	14.7	15.0	15.9	17.1	17.9	18.2	15.4
Raisins	do		11.7	11.6	11.6	11.5	11.6	11.6	11.7	11.8	12.0	12.2	12.4	12.3	11.8
Bananas	Dozen		33.9	33.3	32.1	31.8	31.9	31.7	32.1	31.9	32.1	32.4	32.7	32.2	32.3
Oranges	do		46.4	43.6	38.7	39.8	41.3	44.0	44.9	45.6	44.2	44.9	43.0	43.5	43.3

¹ 16-ounce can.

² 8-ounce package.

³ 28-ounce package.

⁴ No. 2 can.

Table 4 shows the trend in the retail cost of three important groups of food commodities, viz., cereals, meats, and dairy products, by years, from 1913 to 1929, and by months for 1927, 1928, and 1929. The articles within these groups are as follows:

Cereals: Bread, flour, corn meal, rice, rolled oats, corn flakes, wheat cereal, and macaroni.

Meats: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, hens, and leg of lamb.

Dairy products: Butter, cheese, fresh milk, and evaporated milk.

TABLE 4.—INDEX NUMBERS OF RETAIL COST OF CEREALS, MEATS, AND DAIRY PRODUCTS FOR THE UNITED STATES, 1913 TO DECEMBER, 1929

[Average cost in 1913=100.0]

Year and month	Cereals	Meats	Dairy products	Year and month	Cereals	Meats	Dairy products
1913: Average for year.....	100.0	100.0	100.0	1928: Average for year.....	167.2	179.2	150.0
1914: Average for year.....	106.7	103.4	97.1	January.....	168.0	168.3	152.2
1915: Average for year.....	121.6	99.6	96.1	February.....	168.0	167.8	150.7
1916: Average for year.....	126.8	108.2	103.2	March.....	168.8	167.1	150.7
1917: Average for year.....	186.5	137.0	127.6	April.....	167.2	170.3	147.8
1918: Average for year.....	194.3	172.8	153.4	May.....	168.3	175.4	147.3
1919: Average for year.....	198.0	184.2	176.6	June.....	169.8	177.7	146.1
1920: Average for year.....	232.1	185.7	185.1	July.....	169.3	184.4	147.1
1921: Average for year.....	179.8	158.1	149.5	August.....	168.2	189.5	148.3
1922: Average for year.....	159.3	150.3	135.9	September.....	166.7	195.8	151.2
1923: Average for year.....	156.9	149.0	147.6	October.....	165.9	188.9	151.1
1924: Average for year.....	160.4	150.2	142.8	November.....	165.3	184.9	152.5
1925: Average for year.....	176.2	163.0	147.1	December.....	164.2	179.1	153.5
1926: Average for year.....	175.5	171.3	145.5	1929: Average for year.....	164.1	188.4	148.6
1927: Average for year.....	170.7	169.9	148.7	January.....	164.1	180.9	151.9
January.....	172.8	168.1	151.4	February.....	164.1	180.3	152.6
February.....	172.7	167.6	151.8	March.....	164.1	182.8	152.4
March.....	172.1	168.5	152.2	April.....	164.1	187.5	148.9
April.....	171.7	170.6	150.8	May.....	163.5	191.2	147.5
May.....	171.6	170.7	145.3	June.....	163.0	192.4	146.8
June.....	170.7	168.3	143.7	July.....	163.5	195.9	146.8
July.....	170.6	169.3	143.9	August.....	164.7	196.0	147.1
August.....	171.2	171.0	144.5	September.....	165.2	194.2	148.1
September.....	170.6	173.0	146.6	October.....	163.5	189.2	149.3
October.....	170.5	173.7	149.4	November.....	163.6	184.1	147.0
November.....	169.8	169.9	150.2	December.....	162.9	181.8	144.9
December.....	168.6	168.1	152.8				

Index Numbers of Retail Prices of Food in the United States

IN TABLE 5 index numbers are given which show the changes in the retail prices of specified food articles, by years, for 1913 and 1920 to 1929,² and by months for 1928 and 1929. These index numbers, or relative prices, are based on the year 1913 as 100 and are computed by dividing the average price of each commodity for each month and each year by the average price of that commodity for 1913. These figures must be used with caution. For example, the relative price of sirloin steak for the year 1929 was 196.9, which means that the average money price for the year 1929 was 96.9 per cent higher than the average money price for the year 1913. As compared with the relative price, 188.2 in 1928, the figures for 1929 show an increase of 8.7 points, but an increase of 4.6 per cent in the year.

In the last column of Table 5 are given index numbers showing changes in the retail cost of all articles of food combined. Since January, 1921, these index numbers have been computed from the average prices of the articles of food shown in Tables 1 and 2, weighted according to the average family consumption in 1918. (See March, 1921, issue, p. 25.) Although previous to January, 1921, the number of food articles has varied, these index numbers have been so computed as to be strictly comparable for the entire period. The index

² For index numbers of each month, January, 1913, to December, 1926, see Bulletin No. 396, pp. 44 to 61; Bulletin No. 418, pp. 38 to 51; Bulletin No. 445, pp. 36 to 49; Bulletin No. 464, pp. 36 to 49; and Bulletin No. 495, pp. 32 to 45.

numbers based on the average for the year 1913 as 100 are 159.7 for November, 1929, and 158.0 for December, 1929.

The curve shown in the chart on this page pictures more readily to the eye the changes in the cost of the food budget than do the index numbers given in the table.

TREND OF RETAIL PRICES OF FOOD

[1913=100]

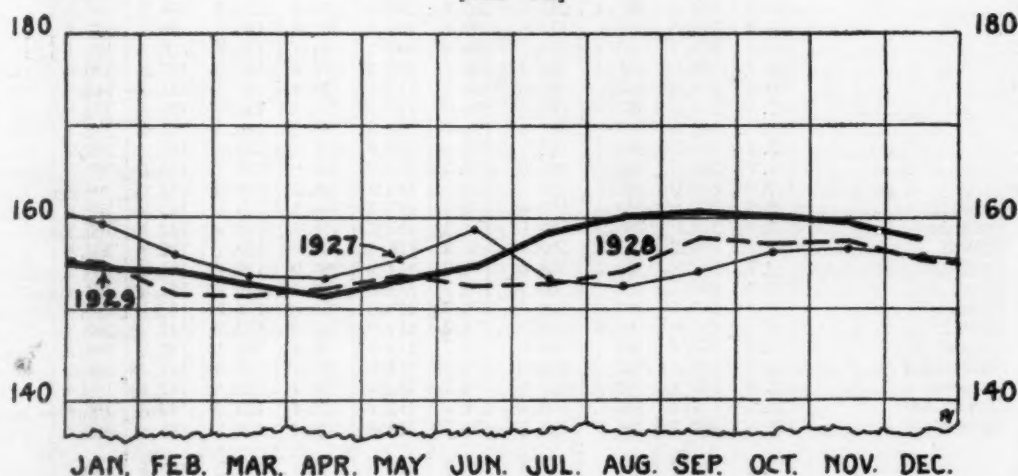


TABLE 5.—INDEX NUMBERS OF RETAIL PRICES OF PRINCIPAL ARTICLES OF FOOD, BY YEARS, 1913, 1920 TO 1929, AND BY MONTHS FOR 1928 AND 1929

[Average for year 1913=100.0]

Year and month	Sirloin steak	Round steak	Rib roast	Chuck roast	Plate beef	Pork chops	Bacon	Ham	Hens	Milk	Butter	Cheese
1913.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920.....	172.1	177.1	167.7	163.8	151.2	201.4	193.7	206.3	209.9	187.6	183.0	188.2
1921.....	152.8	154.3	147.0	132.5	118.2	166.2	158.2	181.4	186.4	164.0	135.0	153.9
1922.....	147.2	144.8	139.4	123.1	105.8	157.1	147.4	181.4	169.0	147.2	125.1	148.9
1923.....	153.9	150.2	143.4	126.3	106.6	144.8	144.8	169.1	164.3	155.1	144.7	167.0
1924.....	155.9	151.6	145.5	130.0	109.1	146.7	139.6	168.4	165.7	155.1	135.0	159.7
1925.....	159.8	155.6	149.5	135.0	114.1	174.3	173.0	195.5	171.8	157.3	143.1	166.1
1926.....	162.6	159.6	153.0	140.6	120.7	188.1	186.3	213.4	182.2	157.3	138.6	165.6
1927.....	167.7	166.4	158.1	148.1	127.3	175.2	174.8	204.5	173.2	158.4	145.2	170.1
1928.....	188.2	188.3	176.8	174.4	157.0	165.7	163.0	196.7	175.6	159.6	147.5	174.2
1929.....	196.9	199.1	185.4	186.9	172.7	175.7	161.1	204.1	186.4	160.7	143.9	171.9
1928: January	174.8	173.1	165.2	158.8	142.1	149.0	165.2	192.2	172.8	160.7	150.9	177.4
February	176.4	174.4	167.2	160.6	144.6	140.5	161.9	190.3	174.6	160.7	147.0	177.4
March	176.8	175.3	167.2	161.3	146.3	136.2	159.3	187.7	174.6	159.6	149.6	174.2
April	178.3	177.6	168.7	163.1	147.9	149.0	158.9	188.1	177.0	158.4	143.9	172.9
May	181.5	181.2	172.2	166.3	150.4	168.6	159.6	190.3	177.0	158.4	142.6	172.4
June	186.6	186.5	175.3	172.5	152.9	165.7	160.0	192.2	174.2	157.3	140.7	172.4
July	195.7	196.9	181.8	180.6	157.9	177.6	162.6	198.5	172.3	158.4	141.8	173.3
August	200.8	202.2	184.8	185.0	162.0	190.0	165.9	204.5	172.8	158.4	144.7	173.8
September	203.9	205.4	188.9	190.0	170.2	211.0	168.1	208.2	177.9	159.6	150.4	175.1
October	198.0	200.0	185.9	188.8	171.9	179.0	167.8	206.7	177.9	159.6	150.1	175.6
November	193.3	194.6	183.3	185.6	171.9	170.0	164.8	203.0	178.4	160.7	152.2	174.2
December	189.8	191.5	180.3	181.9	168.6	149.0	160.4	198.5	177.9	160.7	154.8	174.2
1929: January	190.6	191.0	180.8	181.3	170.2	153.8	159.3	200.0	184.0	160.7	150.7	173.8
February	188.2	188.8	178.8	179.4	167.8	157.1	158.2	199.6	186.4	160.7	152.7	172.9
March	183.6	189.2	179.3	180.0	167.8	167.6	158.9	201.9	190.1	160.7	152.5	172.9
April	192.9	194.6	183.8	184.4	170.2	176.7	160.4	203.3	196.2	159.6	145.7	172.4
May	198.4	201.3	187.9	190.0	174.4	179.5	160.7	204.8	198.1	159.6	142.3	171.9
June	201.6	205.4	189.9	191.9	176.0	179.0	162.2	205.6	193.9	159.6	140.5	171.9
July	206.7	210.8	192.9	195.6	177.7	188.1	164.1	209.7	187.3	160.7	139.4	171.5
August	206.3	210.8	191.9	194.4	176.0	192.4	165.6	211.2	185.0	160.7	140.5	171.0
September	202.8	206.7	189.4	191.9	175.2	193.8	164.4	209.7	184.0	160.7	143.1	171.9
October	198.0	199.6	186.9	187.5	173.6	185.2	161.9	204.8	180.3	161.8	145.4	171.5
November	194.1	196.4	183.3	183.8	171.1	170.5	159.3	200.4	177.0	161.8	139.7	171.0
December	192.5	194.6	181.8	183.1	170.2	163.3	157.4	198.5	174.2	161.8	134.7	170.6

TABLE 5.—INDEX NUMBERS OF RETAIL PRICES OF PRINCIPAL ARTICLES OF FOOD, BY YEARS, 1913, 1920 TO 1929, AND BY MONTHS FOR 1928 AND 1929—Continued

[Average for year 1913=100.0]

Year and month	Lard	Eggs	Bread	Flour	Corn meal	Rice	Pota- toes	Sugar	Tea	Coffee	All arti- cles ¹
1913	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920	186.7	197.4	205.4	245.5	216.7	200.0	370.6	352.7	134.7	157.7	203.4
1921	113.9	147.5	176.8	175.8	150.0	109.2	182.4	145.5	128.1	121.8	153.3
1922	107.6	128.7	155.4	154.5	130.0	109.2	164.7	132.7	125.2	121.1	141.6
1923	112.0	134.8	155.4	142.4	136.7	109.2	170.6	183.6	127.8	126.5	146.2
1924	120.3	138.6	157.1	148.5	156.7	116.1	158.8	167.3	131.4	145.3	145.9
1925	147.5	151.0	167.9	184.8	180.0	127.6	211.8	130.9	138.8	172.8	157.4
1926	138.6	140.6	167.9	181.8	170.0	133.3	288.2	125.5	141.0	171.1	160.6
1927	122.2	131.0	166.1	166.7	173.3	123.0	223.5	132.7	142.5	162.1	155.4
1928	117.7	134.5	162.5	163.6	176.7	114.9	158.8	129.1	142.3	165.1	154.3
1929	115.8	142.0	160.7	154.5	176.7	111.5	188.2	120.0	142.6	164.8	156.7
1928: January	119.6	162.0	164.3	160.6	173.3	117.2	176.5	129.1	142.3	162.8	155.1
February	115.8	124.9	164.3	160.6	173.3	117.2	176.5	129.1	142.1	163.1	151.6
March	112.7	107.2	162.5	160.6	173.3	116.1	200.0	129.1	142.3	163.8	151.4
April	112.7	103.8	162.5	163.6	176.7	114.9	205.9	129.1	141.9	164.1	152.1
May	114.6	108.7	162.5	169.7	176.7	114.9	194.1	130.9	141.9	164.4	153.8
June	115.2	112.5	164.3	172.7	176.7	113.8	170.6	132.7	142.1	165.1	152.6
July	116.5	120.6	164.3	169.7	176.7	114.9	135.3	132.7	142.3	165.1	152.8
August	118.4	130.4	164.3	163.6	176.7	113.8	129.4	129.1	142.3	165.8	154.2
September	122.2	146.1	162.5	160.6	176.7	114.9	129.4	127.3	142.3	166.1	157.8
October	123.4	157.4	162.5	157.6	176.7	113.8	129.4	125.5	142.5	166.4	156.8
November	120.9	171.9	162.5	154.5	176.7	112.6	129.4	123.6	142.3	166.8	157.3
December	118.4	160.3	160.7	154.5	176.7	113.8	129.4	121.8	142.1	166.8	155.8
1929: January	117.1	146.7	160.7	154.5	176.7	112.6	135.3	121.8	142.5	166.1	154.6
February	116.5	142.3	160.7	154.5	176.7	112.6	135.3	120.0	142.6	166.1	154.4
March	116.5	122.0	160.7	154.5	176.7	112.6	135.3	118.2	142.6	166.4	153.0
April	117.1	106.4	160.7	154.5	176.7	112.6	135.3	116.4	142.6	166.4	151.6
May	116.5	112.2	160.7	151.5	176.7	111.5	158.8	116.4	142.6	166.1	153.3
June	115.8	120.0	160.7	148.5	176.7	111.5	182.4	116.4	142.5	165.8	154.8
July	115.8	127.8	160.7	151.5	176.7	111.5	229.4	116.4	142.3	165.8	158.5
August	116.5	140.0	160.7	157.6	176.7	112.6	235.3	120.0	142.5	165.4	160.2
September	117.1	153.6	160.7	160.6	176.7	111.5	229.4	121.8	142.6	165.1	160.8
October	115.8	168.1	158.9	157.6	176.7	111.5	223.5	121.8	142.6	164.8	160.5
November	113.9	183.5	158.9	157.6	176.7	111.5	223.5	121.8	142.3	162.1	159.7
December	111.4	182.0	158.9	154.5	180.0	110.3	223.5	120.0	142.8	155.4	158.0

¹ 22 articles in 1913-1920; 43 articles in 1921-1929.

Table 6 shows by index numbers the trend in the retail cost of food in the United States from 1890 to 1929. The percentage increase in the cost from 1928 to 1929 was 1.6, while the percentage increase from 1890 to 1929 was 125. This means that the cost of food in 1929 was nearly two and a quarter times as much as it was in 1890.

TABLE 6.—INDEX NUMBERS SHOWING THE TREND IN THE RETAIL COST OF FOOD IN THE UNITED STATES, BY YEARS, 1890 TO 1929¹

[Average for year 1913=100]

Year	Relative price	Year	Relative price	Year	Relative price	Year	Relative price
1890	69.6	1900	68.7	1910	93.0	1920	203.4
1891	70.6	1901	71.5	1911	92.0	1921	153.3
1892	69.3	1902	75.4	1912	97.6	1922	141.6
1893	71.0	1903	75.0	1913	100.0	1923	146.2
1894	67.8	1904	76.0	1914	102.4	1924	145.9
1895	66.5	1905	76.4	1915	101.3	1925	157.4
1896	64.9	1906	78.7	1916	113.7	1926	160.6
1897	65.4	1907	82.0	1917	146.4	1927	155.4
1898	67.1	1908	84.3	1918	168.3	1928	154.3
1899	67.7	1909	88.7	1919	185.9	1929	156.7

¹ The number of articles included in the index number for each year has not been the same throughout the period, but a sufficient number have been used fairly to represent food as a whole. From 1890 to 1907, 30 articles were used; from 1907 to 1913, 15 articles; from 1913 to 1920, 22 articles; and from 1921, 43 articles. The relatives for the period have been so computed as to be comparable with each other.

TABLE 7.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, DECEMBER 15, 1928, AND NOVEMBER 15 AND DECEMBER 15, 1929

[Exact comparison of prices in different cities can not be made for some articles, particularly meats and vegetables, owing to differences in trade practices]

Article	Atlanta, Ga.			Baltimore, Md.			Birmingham, Ala.			Boston, Mass.			Bridgeport, Conn.		
	1929			1929			1929			1929			1929		
	Dec. 15, 1928	Nov. 15	Dec. 15	Dec. 15, 1928	Nov. 15	Dec. 15	Dec. 15, 1928	Nov. 15	Dec. 15	Dec. 15, 1928	Nov. 15	Dec. 15	Dec. 15, 1928	Nov. 15	Dec. 15
Sirloin steak.....pound..	Cts. 48.1	Cts. 48.8	Cts. 47.1	Cts. 45.1	Cts. 46.2	Cts. 45.8	Cts. 49.4	Cts. 50.8	Cts. 50.3	Cts. 174.7	Cts. 173.5	Cts. 173.4	Cts. 57.5	Cts. 58.5	Cts. 57.4
Round steak.....do.....	43.4	43.8	42.5	41.2	43.0	42.7	42.1	43.3	43.1	60.3	59.3	58.0	52.2	53.0	52.0
Rib roast.....do.....	35.3	36.6	34.5	34.6	35.5	35.1	33.9	36.3	35.8	43.1	42.4	42.9	42.5	41.0	40.8
Chuck roast.....do.....	29.7	29.4	28.0	27.7	29.0	28.2	27.7	29.3	28.8	33.6	33.9	34.5	36.1	35.5	34.9
Plate beef.....do.....	19.6	21.0	20.5	20.9	21.0	20.5	18.2	20.1	20.3	22.9	23.1	21.5	16.5	16.5	16.4
Pork chops.....do.....	32.5	35.0	33.3	26.9	33.4	31.8	30.8	34.4	32.4	32.2	38.6	35.7	32.1	36.9	36.1
Bacon, sliced.....do.....	40.9	39.2	38.9	37.8	38.8	37.6	41.3	40.0	40.0	42.0	41.1	40.9	48.3	47.6	46.5
Ham, sliced.....do.....	56.3	55.0	54.2	54.9	54.6	54.6	53.5	54.7	53.1	57.4	57.8	57.3	57.0	57.3	54.6
Lamb, leg of.....do.....	39.7	41.1	40.1	35.7	37.2	37.4	41.0	42.8	41.8	38.1	38.0	38.1	37.7	38.4	37.8
Hens.....do.....	36.3	36.7	35.9	39.8	39.4	38.5	33.8	35.4	34.7	40.1	40.4	39.8	40.4	40.9	40.0
Salmon, canned, red.....pound..	34.8	33.3	33.3	28.9	28.4	28.5	34.1	33.2	33.1	30.9	32.0	31.3	31.0	30.9	30.9
Milk, fresh.....quart..	16.5	17.0	17.0	14.0	14.0	14.0	18.7	17.0	17.0	15.8	15.8	15.6	16.0	17.0	17.0
Milk, evaporated.....16-ounce can..	14.0	11.6	11.4	10.9	10.1	10.0	12.2	11.2	11.0	11.9	11.1	11.1	11.5	10.6	10.5
Butter.....pound..	59.5	55.8	54.7	61.9	57.3	56.5	60.4	56.0	54.4	60.2	55.0	53.8	58.7	54.6	52.8
Oleomargarine (all butter substitutes).....pound..	28.4	28.8	28.1	28.1	26.9	27.6	31.8	30.7	30.3	29.3	29.2	28.1	25.2	27.0	26.7
Cheese.....do.....	37.4	35.1	35.1	36.8	35.7	35.6	37.7	36.1	35.9	40.6	40.2	40.1	43.8	42.1	42.1
Lard.....do.....	18.9	17.3	17.0	16.4	16.3	15.9	18.1	17.4	17.0	18.5	17.9	17.7	17.9	16.5	16.6
Vegetable lard substitute.....pound..	22.9	21.1	21.3	22.9	23.3	22.9	19.7	22.0	21.8	25.3	26.1	26.7	25.2	25.4	25.3
Eggs, strictly fresh.....dozen..	55.8	58.2	61.2	59.0	62.7	64.4	56.0	63.5	62.0	73.8	83.6	80.5	78.9	80.5	81.4
Bread.....pound..	10.8	10.1	10.0	8.5	8.5	8.5	10.0	9.8	9.7	8.6	8.8	8.8	8.8	8.8	8.8
Flour.....do.....	6.6	6.2	6.2	4.7	4.9	4.8	6.5	6.2	6.2	5.3	5.6	5.6	5.1	5.3	5.2
Corn meal.....do.....	4.4	4.2	4.1	4.2	4.0	4.0	4.1	4.1	4.4	7.0	7.0	7.0	7.0	7.1	7.1
Rollod oats.....do.....	9.7	9.5	9.7	8.0	8.1	8.1	9.8	9.5	9.6	9.0	8.6	8.4	8.4	8.2	8.2
Corn flakes.....8-ounce package..	9.8	9.8	9.8	8.6	8.9	8.8	9.9	9.4	9.4	9.3	9.3	9.3	9.4	9.2	9.1
Wheat cereal.....28-ounce package..	26.5	27.5	27.4	24.2	24.3	24.2	27.2	27.1	27.1	25.0	25.2	25.1	24.2	24.5	24.6
Macaroni.....pound..	21.8	20.9	20.9	19.0	18.9	19.1	18.0	18.4	17.8	21.0	21.8	21.8	22.1	21.1	21.1
Rice.....do.....	10.0	9.4	9.4	8.8	9.1	9.0	9.0	9.1	9.1	10.8	11.0	10.5	10.6	9.7	9.4
Beans, navy.....do.....	15.1	15.5	15.5	12.4	13.3	12.4	13.3	15.3	14.7	12.3	13.3	13.1	12.5	14.3	13.5
Potatoes.....do.....	3.6	4.4	4.3	1.8	3.9	3.9	3.4	4.5	4.4	2.0	3.7	3.7	1.9	3.4	3.5
Onions.....do.....	8.9	7.5	7.4	7.1	5.3	5.2	8.0	6.4	6.4	7.8	4.9	5.0	7.3	4.7	5.1
Cabbage.....do.....	5.6	4.8	4.8	4.4	3.9	4.4	5.5	4.7	4.7	5.2	5.0	5.3	5.2	4.6	4.8
Beans, baked.....No. 2 can..	11.5	11.2	11.0	10.8	10.9	10.8	11.7	11.2	11.1	12.7	12.5	12.5	11.6	11.6	11.6
Corn, canned.....do.....	18.8	17.4	17.4	16.3	17.2	17.2	16.2	16.3	16.4	17.3	17.8	17.9	18.9	17.6	17.5
Peas, canned.....do.....	19.7	18.7	18.7	15.0	14.8	14.7	19.2	18.6	19.1	19.7	20.1	19.7	20.2	17.7	17.7
Tomatoes, canned.....No. 2 can..	11.8	11.7	11.7	10.7	10.6	10.2	11.2	11.6	11.4	13.0	14.1	14.1	13.6	13.9	13.8
Sugar, granulated.....pound..	7.4	7.3	7.3	5.7	5.9	5.7	7.0	6.9	6.9	6.7	6.5	6.3	6.5	6.6	6.4
Tea.....do.....	108.2	103.4	103.0	73.4	73.8	73.2	97.6	94.3	94.0	72.5	77.5	77.6	61.0	56.4	56.3
Coffee.....do.....	52.8	49.4	45.2	45.0	44.3	42.4	51.9	50.8	49.7	54.0	52.4	48.8	47.7	44.7	40.8
Prunes.....do.....	15.9	18.5	17.7	11.7	16.4	16.9	16.6	20.3	20.7	13.7	17.4	17.6	14.6	17.7	17.5
Raisins.....do.....	13.6	14.3	14.1	10.4	11.1	11.0	13.0	13.0	13.0	11.2	11.5	11.6	12.5	12.5	12.4
Bananas.....dozen..	28.6	27.5	27.5	23.5	23.9	23.7	36.8	35.6	35.7	44.2	39.0	40.0	33.3	31.0	32.0
Oranges.....do.....	34.4	32.6	34.6	41.8	42.3	39.4	39.9	39.2	39.7	51.8	46.7	46.7	56.6	52.8	52.7

¹ The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

TABLE 7.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN FOUR CITIES, DECEMBER 15, 1928, AND NOVEMBER 15 AND DECEMBER 15, 1929—Contd.

Article	Buffalo, N. Y.			Butte, Mont.			Charleston, S. C.			Chicago, Ill.			Cincinnati, Ohio		
	Dec. 15, 1928	1929		Dec. 15, 1928	1929		Dec. 15, 1928	1929		Dec. 15, 1928	1929		Dec. 15, 1928	1929	
		Nov. 15	Dec. 15		Nov. 15	Dec. 15		Nov. 15	Dec. 15		Nov. 15	Dec. 15		Nov. 15	Dec. 15
Sirloin steak.....pound	Cts. 46.6	Cts. 50.2	Cts. 49.5	Cts. 35.4	Cts. 35.7	Cts. 35.5	Cts. 36.2	Cts. 38.8	Cts. 38.5	Cts. 54.5	Cts. 54.6	Cts. 55.0	Cts. 44.7	Cts. 45.5	Cts. 46.0
Round steak.....do	39.9	42.8	42.6	33.6	34.5	33.9	35.0	38.5	38.1	44.2	45.8	45.8	41.1	43.2	43.4
Rib roast.....do	35.0	36.6	35.3	30.1	31.0	30.0	29.2	32.2	31.9	41.5	41.3	40.9	36.7	37.6	37.5
Chuck roast.....do	30.0	31.6	30.8	24.4	26.0	25.6	24.8	25.3	25.5	34.3	34.5	34.7	27.8	28.8	28.8
Plate beef.....do	19.1	20.2	20.2	17.1	17.0	17.0	18.9	20.7	19.4	20.7	21.4	20.3	21.4	22.5	22.4
Pork chops.....do	31.8	37.8	35.2	31.8	35.9	34.4	33.7	35.0	34.6	30.8	34.3	37.6	27.4	33.4	29.8
Bacon, sliced.....do	39.6	40.5	39.1	49.2	47.9	47.1	38.1	38.9	37.3	47.7	48.4	46.8	38.7	39.9	39.3
Ham, sliced.....do	52.1	53.1	51.5	52.9	55.4	53.8	47.9	48.2	47.5	54.2	55.8	55.9	53.3	53.0	52.6
Lamb, leg of.....do	33.6	33.7	34.1	36.8	37.3	36.5	41.0	42.0	43.0	37.7	38.4	37.9	38.9	39.4	39.8
Hens.....do	39.7	38.1	37.7	32.1	32.6	31.6	37.0	38.0	37.2	39.1	37.6	36.7	38.5	38.2	36.3
Salmon, canned, red															
.....pound	30.9	29.7	29.8	31.6	31.3	31.3	29.2	29.7	29.8	33.8	33.1	34.0	31.1	29.5	29.9
Milk, fresh.....quart	14.0	14.0	14.0	14.0	14.0	14.0	19.0	19.0	19.0	14.0	14.0	14.0	14.0	14.0	14.0
Milk, evaporated															
.....16-ounce can	11.1	10.1	10.1	11.2	10.4	10.4	11.8	10.0	10.0	11.1	10.2	10.3	11.3	10.5	10.5
Butter.....pound	60.7	53.1	52.1	56.4	55.5	53.5	56.9	52.3	50.8	58.3	50.9	48.6	61.4	54.2	52.8
Oleomargarine (all															
butter substitutes)															
.....pound	27.7	25.9	25.7	-----	-----	-----	29.0	27.3	27.3	26.4	26.2	26.4	28.9	27.8	27.3
Cheese.....do	39.4	39.0	38.7	38.2	36.1	36.7	34.9	34.7	34.5	43.1	42.0	41.9	39.5	38.5	39.8
Lard.....do	17.9	16.9	16.5	22.7	20.9	20.8	18.7	18.8	18.4	19.0	18.1	18.3	17.6	17.2	16.9
Vegetable lard substi-															
tute.....pound	25.4	24.5	24.4	30.3	31.0	29.8	21.4	20.9	20.7	25.8	25.6	25.5	25.6	26.2	26.0
Eggs, strictly fresh															
.....dozen	58.4	67.6	65.6	60.5	61.6	64.1	54.6	57.1	56.5	58.9	63.6	64.9	53.4	66.3	65.7
Bread.....pound	8.4	8.3	8.3	9.8	9.8	9.8	11.0	11.0	11.0	9.9	9.7	9.7	8.6	8.7	8.7
Flour.....do	4.6	4.7	4.7	4.9	5.0	4.9	6.6	6.5	6.5	4.5	4.7	4.7	5.3	5.4	5.4
Corn meal.....do	5.0	5.1	5.2	6.3	6.1	6.0	3.9	4.0	4.0	5.9	6.4	6.6	4.5	4.8	5.0
Rollod oats.....do	8.7	8.7	8.5	7.6	7.8	7.9	9.3	9.3	9.3	8.3	8.1	8.3	9.0	9.0	8.9
Corn flakes															
.....8-ounce package	9.2	9.0	9.1	10.3	10.3	10.3	10.1	10.0	10.0	9.2	9.1	9.2	9.6	9.6	9.6
Wheat cereal															
.....28-ounce package	24.9	24.8	24.8	28.5	28.4	28.4	25.6	25.2	25.2	25.3	24.6	25.3	24.9	24.8	24.8
Macaroni.....pound	21.2	21.3	21.3	19.9	19.9	20.2	18.5	19.2	19.2	18.5	18.6	19.0	18.5	18.8	19.8
Rice.....do	9.4	8.8	8.8	11.3	11.0	11.0	6.7	6.7	6.6	10.6	10.6	10.4	9.4	10.0	9.9
Beans, navy.....do	12.6	13.6	13.5	12.2	13.1	13.2	14.5	15.1	14.5	12.8	13.4	13.1	12.9	12.6	12.1
Potatoes.....do	1.8	3.2	3.3	1.5	3.3	3.3	2.5	4.3	4.2	2.1	3.7	3.9	2.3	4.1	4.1
Onions.....do	7.6	5.4	5.7	6.1	4.3	4.1	8.3	5.6	5.7	7.2	5.3	5.3	6.9	5.3	5.2
Cabbage.....do	4.1	3.7	4.1	4.5	4.7	4.9	5.3	4.8	4.8	4.9	4.8	5.0	4.8	4.4	4.5
Beans, baked															
.....No. 2 can	10.5	10.2	10.1	13.8	13.7	13.7	10.6	10.6	10.4	12.5	12.4	12.4	11.1	11.4	11.2
Corn, canned.....do	15.6	15.6	15.6	14.8	14.3	14.3	14.4	14.4	14.6	15.8	15.3	15.8	15.5	15.5	15.9
Peas, canned.....do	15.5	15.4	15.4	13.8	14.3	14.3	16.2	15.8	16.0	16.6	16.3	16.5	16.6	16.5	17.0
Tomatoes, canned															
.....No. 2 can	12.5	13.9	13.4	12.8	12.4	12.4	10.2	10.1	10.1	13.7	13.4	14.0	12.6	13.1	13.3
Sugar, granulated															
.....pound	6.4	6.3	6.3	8.2	7.6	7.7	6.4	6.4	6.2	6.5	6.5	6.5	7.2	6.9	6.9
Tea.....do	68.1	68.1	68.5	82.6	82.9	82.4	81.5	81.2	81.2	69.3	68.2	73.3	80.0	80.2	80.8
Coffee.....do	47.5	46.7	44.8	55.5	54.0	53.0	46.7	46.4	44.8	49.7	46.1	45.2	46.7	44.5	43.4
Prunes.....do	13.9	17.7	18.5	14.5	17.3	16.7	12.3	17.8	17.9	15.8	19.0	19.5	14.3	18.2	18.6
Raisins.....do	11.2	12.3	12.0	12.9	13.2	13.2	9.9	11.6	11.2	12.3	12.0	12.2	12.2	12.4	12.6
Bananas.....dozen	41.0	42.1	41.8	13.4	13.9	13.9	27.5	27.8	26.7	37.8	39.4	39.2	40.6	36.4	37.0
Oranges.....do	52.4	47.7	45.4	50.7	48.3	49.1	27.8	53.6	52.6	51.6	49.0	54.0	41.8	47.0	41.2

¹ Per pound.

TABLE 7.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, DECEMBER 15, 1928, AND NOVEMBER 15 AND DECEMBER 15, 1929—Contd.

Article	Cleveland, Ohio			Columbus, Ohio			Dallas, Tex.			Denver, Colo.			Detroit, Mich.		
	Dec. 15, 1928	1929		Dec. 15, 1928	1929		Dec. 15, 1928	1929		Dec. 15, 1928	1929		Dec. 15, 1928	1929	
		Nov. 15	Dec. 15		Nov. 15	Dec. 15		Nov. 15	Dec. 15		Nov. 15	Dec. 15		Nov. 15	Dec. 15
Sirloin steak.....pound..	44.3	46.5	44.8	46.7	48.3	47.8	44.1	46.9	47.8	39.3	38.9	38.3	50.1	50.3	48.8
Round steak.....do.....	39.6	40.8	39.2	42.3	44.0	43.4	41.2	45.6	45.5	35.5	35.5	34.8	42.0	41.9	41.1
Rib roast.....do.....	33.2	33.9	33.1	36.3	38.2	36.8	36.8	37.3	37.3	30.2	29.5	29.4	36.8	38.3	37.1
Chuck roast.....do.....	30.0	30.2	29.2	32.0	31.5	31.3	29.8	30.3	30.3	25.7	24.9	24.8	29.8	30.3	30.0
Plate beef.....do.....	19.5	20.5	20.5	22.2	23.7	23.3	23.1	24.6	24.2	16.5	16.9	17.1	19.3	20.6	20.4
Pork chops.....do.....	29.3	33.2	32.1	28.9	34.0	31.8	35.9	37.5	36.3	30.9	34.6	33.3	31.7	37.2	35.6
Bacon, sliced.....do.....	42.0	39.8	40.0	43.2	44.4	43.7	47.1	41.5	41.2	41.9	40.7	40.9	44.0	43.5	41.7
Ham, sliced.....do.....	54.2	53.3	51.7	53.3	52.7	50.5	56.4	55.4	55.4	52.4	52.2	53.5	58.3	58.2	57.0
Lamb, leg of.....do.....	36.3	35.8	35.9	43.4	44.2	43.0	45.0	43.7	42.6	34.5	34.8	35.0	38.3	36.9	37.7
Hens.....do.....	38.9	36.5	35.8	38.3	40.0	39.2	33.8	33.4	33.8	31.8	29.8	29.7	40.3	38.0	38.8
Salmon, canned, red pound..	31.2	32.1	32.3	32.3	32.8	33.1	34.2	33.5	32.8	31.6	32.7	33.3	30.0	31.6	31.1
Milk, fresh.....quart..	13.7	12.0	11.0	12.0	12.0	12.0	13.0	13.0	13.0	12.0	12.0	12.0	14.0	14.0	14.0
Milk, evaporated 16-ounce can..	11.2	10.1	10.0	11.5	10.5	10.6	13.5	12.7	12.6	10.7	9.9	10.0	11.2	10.5	10.3
Butter.....pound..	61.9	54.3	51.3	59.4	51.3	48.1	60.2	53.3	53.5	54.3	47.0	45.8	59.9	51.3	50.3
Oleomargarine (all butter substitutes) pound..	28.8	28.1	28.1	27.4	26.8	26.7	28.7	27.8	27.3	24.8	24.1	23.8	26.4	25.3	24.9
Cheese.....do.....	40.3	40.7	40.4	36.7	37.2	37.4	38.4	36.6	36.7	39.8	38.9	37.4	39.4	39.4	38.3
Lard.....do.....	19.5	19.3	18.2	16.2	15.1	15.3	20.8	21.7	21.2	19.0	18.3	17.8	18.3	17.6	17.3
Vegetable lard substitute.....pound..	26.3	26.3	26.3	27.8	26.2	27.0	23.5	21.1	21.2	21.6	20.2	20.4	26.2	25.6	25.7
Eggs, strictly fresh dozen..	59.9	69.1	66.3	54.7	58.0	57.6	59.2	55.6	62.5	58.6	57.8	58.7	60.2	61.7	62.3
Bread.....pound..	7.8	7.8	7.8	7.8	7.7	7.7	9.3	8.9	8.9	7.7	7.6	7.7	8.1	8.1	8.0
Flour.....do.....	5.1	5.2	5.2	4.9	4.9	4.9	5.4	5.2	5.2	3.9	3.9	4.0	4.6	4.9	4.8
Corn meal.....do.....	5.6	5.4	5.6	4.2	4.2	4.2	4.6	4.3	4.6	4.5	4.6	4.7	6.0	6.2	5.9
Rolled oats.....do.....	9.0	8.9	8.8	9.1	9.0	9.0	10.1	9.8	9.6	7.6	7.5	7.4	9.1	9.1	8.8
Corn flakes 8-ounce package..	9.9	9.6	10.0	10.0	10.0	9.8	10.2	9.8	9.8	9.6	9.5	9.5	9.3	9.5	9.6
Wheat cereal 28-ounce package..	25.4	25.3	26.1	26.6	26.5	27.0	27.8	27.0	27.0	24.5	24.6	24.7	25.8	26.4	26.6
Macaroni.....pound..	20.8	20.4	19.5	19.8	20.0	19.5	21.5	20.5	20.5	19.7	19.4	19.4	20.9	21.1	18.8
Rice.....do.....	9.6	10.4	10.3	11.4	10.9	11.2	11.9	10.8	10.5	9.0	8.7	8.9	11.1	10.6	9.8
Beans, navy.....do.....	12.5	14.3	13.5	13.1	13.2	11.5	13.3	14.9	14.4	12.2	12.4	12.1	12.6	12.6	11.8
Potatoes.....do.....	2.2	3.7	3.9	2.0	3.7	3.7	4.3	5.3	5.4	1.8	3.2	3.1	1.5	3.2	3.3
Onions.....do.....	7.0	4.1	4.2	7.6	5.0	4.6	7.1	6.8	7.0	5.4	4.2	4.0	6.6	4.0	4.3
Cabbage.....do.....	5.2	4.0	4.3	5.2	4.3	4.3	5.2	5.4	5.3	3.6	3.8	4.1	3.7	3.6	4.0
Beans, baked No. 2 can..	12.2	11.7	11.7	12.1	10.9	10.9	12.8	12.5	12.8	11.1	11.5	11.3	12.0	11.5	11.0
Corn, canned.....do.....	16.5	16.3	16.4	13.9	14.1	14.0	18.5	17.0	17.0	14.0	14.3	14.6	15.8	15.2	15.2
Peas, canned.....do.....	17.2	17.0	16.2	14.8	15.1	15.2	22.0	21.7	21.7	14.9	15.6	15.5	16.4	15.7	15.3
Tomatoes, canned No. 2 can..	13.3	14.3	13.9	12.8	13.2	13.2	12.3	13.1	13.1	11.7	12.8	13.3	12.7	12.2	12.1
Sugar, granulated pound..	7.2	7.2	7.2	7.3	7.2	7.2	7.5	7.0	7.2	7.4	7.2	7.1	7.0	6.9	6.9
Tea.....do.....	80.9	81.7	83.0	86.1	85.6	90.7	104.8	100.5	100.5	69.8	68.7	70.0	74.3	72.1	79.6
Coffee.....do.....	51.5	49.5	46.0	48.6	48.7	47.0	59.4	57.4	55.1	49.7	49.6	48.4	48.8	47.6	45.7
Prunes.....do.....	14.0	18.4	18.5	16.2	17.3	18.9	16.9	19.8	20.0	14.8	19.7	20.1	14.8	19.1	18.3
Raisins.....do.....	11.7	12.4	12.4	10.8	12.5	12.7	13.8	13.3	13.0	10.9	12.7	12.5	11.7	12.6	12.3
Bananas.....dozen..	10.0	9.8	9.4	40.6	38.8	37.5	33.3	33.3	31.3	10.8	11.6	10.9	34.0	34.0	31.4
Oranges.....do.....	50.2	50.0	49.6	55.1	46.0	50.4	53.2	41.5	43.4	50.4	35.8	40.2	53.8	44.3	47.5

¹ Per pound.

TABLE 7.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, DECEMBER 15, 1928, AND NOVEMBER 15 AND DECEMBER 15, 1929—Contd.

Article	Fall River, Mass.			Houston, Tex.			Indianapolis, Ind.			Jacksonville, Fla.			Kansas City, Mo.		
	1929			1929			1929			1929			1929		
	Dec. 15, 1928	Nov. 15	Dec. 15	Dec. 15, 1928	Nov. 15	Dec. 15	Dec. 15, 1928	Nov. 15	Dec. 15	Dec. 15, 1928	Nov. 15	Dec. 15	Dec. 15, 1928	Nov. 15	Dec. 15
Sirloin steak.....pound..	Cts. 70.3	Cts. 71.8	Cts. 68.9	Cts. 37.5	Cts. 40.0	Cts. 41.9	Cts. 46.3	Cts. 48.5	Cts. 47.1	Cts. 38.6	Cts. 40.2	Cts. 40.0	Cts. 45.8	Cts. 48.4	Cts. 49.1
Round steak.....do.....	56.4	56.0	53.0	37.3	39.6	40.0	43.8	46.3	45.5	34.6	35.5	35.9	40.5	43.3	43.2
Rib roast.....do.....	38.5	39.1	38.7	29.7	30.8	32.1	34.2	34.3	34.4	30.3	32.1	32.3	32.8	34.6	34.5
Chuck roast.....do.....	30.3	31.6	30.8	24.2	25.0	25.2	30.3	30.9	30.5	24.5	25.7	25.8	26.5	28.2	28.4
Plate beef.....do.....	18.0	18.4	18.5	21.5	22.5	22.0	21.8	20.9	20.8	15.5	17.2	16.4	19.9	20.7	20.9
Pork chops.....do.....	30.5	35.3	33.4	29.9	35.9	35.0	29.5	35.1	32.3	30.2	31.6	31.4	26.5	35.0	31.5
Bacon, sliced.....do.....	40.9	38.2	37.0	40.6	40.6	40.9	41.3	40.0	39.7	37.3	37.7	36.8	40.8	42.2	40.7
Ham, sliced.....do.....	52.3	52.4	52.3	46.6	50.8	51.5	52.9	53.2	52.9	48.2	48.6	47.7	50.2	50.5	49.8
Lamb, leg of.....do.....	40.4	42.4	40.7	34.2	32.9	35.6	40.0	40.8	40.7	40.8	36.7	36.7	33.5	36.0	35.4
Hens.....do.....	43.7	45.4	44.2	36.3	37.2	36.8	42.2	40.6	40.8	35.0	36.0	36.2	33.1	33.7	33.0
Salmon, canned, red.....pound..	34.0	33.5	33.0	30.9	30.2	30.5	33.2	33.6	33.0	31.9	29.1	29.8	34.8	35.3	35.2
Milk, fresh.....quart..	14.7	15.0	15.0	15.4	15.0	15.0	13.0	12.0	12.0	20.3	20.3	20.3	13.0	13.0	13.0
Milk, evaporated.....16-ounce can..	12.5	11.5	11.5	11.3	9.8	9.7	10.6	10.1	9.9	11.7	10.1	10.3	11.5	10.2	10.2
Butter.....pound..	58.1	54.1	52.6	59.1	52.7	52.2	59.8	53.8	52.7	57.9	52.8	52.3	57.6	49.7	48.6
Oleomargarine (all butter substitutes).....pound..	27.5	26.5	27.4	24.6	25.4	25.5	28.6	27.9	27.7	29.6	27.3	27.5	24.6	24.9	24.6
Cheese.....do.....	41.6	41.7	41.6	34.0	33.4	33.2	42.3	40.4	40.3	34.9	33.9	34.3	37.5	37.8	37.1
Lard.....do.....	17.7	17.3	17.1	19.5	20.3	20.1	16.3	15.8	15.6	19.2	18.1	16.8	18.2	17.7	17.6
Vegetable lard substitute.....pound..	26.6	26.4	26.3	16.6	16.3	16.4	27.2	26.8	26.6	21.7	21.8	21.7	26.4	25.8	25.5
Eggs, strictly fresh.....dozen..	79.2	78.9	76.7	50.6	54.3	59.6	56.1	58.7	61.8	50.0	61.7	61.6	51.1	54.8	56.3
Bread.....pound..	9.0	8.3	8.3	8.0	8.2	8.2	7.9	8.0	8.0	10.1	10.0	10.0	9.5	9.3	9.2
Flour.....do.....	5.5	5.6	5.6	4.9	4.9	4.8	5.2	5.1	5.1	6.1	5.9	5.8	4.7	4.8	4.9
Corn meal.....do.....	7.4	6.7	6.5	4.3	4.4	4.6	4.1	4.4	4.4	4.3	4.2	4.2	5.3	5.4	5.2
Rolled oats.....do.....	9.5	9.4	9.6	8.5	8.3	8.1	8.3	8.8	8.8	9.4	9.2	9.2	8.9	9.2	9.2
Corn flakes.....8-ounce package..	9.9	9.7	9.7	8.9	8.9	9.1	9.0	9.5	9.4	9.7	9.6	9.5	9.6	9.6	9.7
Wheat cereal.....28-ounce package..	25.0	24.6	24.6	25.9	24.9	25.6	25.7	25.3	25.2	24.7	25.1	25.1	27.1	27.5	27.2
Macaroni.....pound..	22.9	24.5	25.4	18.7	18.1	17.9	18.7	18.5	19.0	19.0	19.1	19.9	19.8	19.8	19.6
Rice.....do.....	11.2	10.7	10.8	7.3	7.3	7.2	11.0	10.1	10.2	7.6	7.1	7.5	9.0	9.7	9.3
Beans, navy.....do.....	12.8	13.5	13.8	12.3	14.4	14.2	13.0	12.5	11.9	13.1	14.1	13.9	13.5	13.3	12.8
Potatoes.....do.....	1.8	3.6	3.6	3.5	5.0	5.2	1.8	3.6	3.5	2.7	4.3	4.2	1.8	3.8	3.8
Onions.....do.....	7.7	4.7	4.9	7.3	4.8	5.2	7.3	5.6	5.4	8.1	6.0	6.2	7.8	6.1	6.5
Cabbage.....do.....	5.9	4.7	4.9	5.3	5.1	5.1	4.6	4.6	4.9	4.9	4.4	4.2	4.8	4.1	4.3
Beans, baked.....No. 2 can..	12.4	12.6	12.4	10.8	10.7	10.5	11.2	11.0	11.1	10.6	10.5	10.0	12.5	12.4	12.5
Corn, canned.....do.....	16.7	16.4	16.7	14.2	13.9	13.9	14.0	14.6	14.1	18.7	17.2	17.3	14.7	15.3	14.9
Peas, canned.....do.....	19.0	18.4	18.4	14.8	15.3	15.5	14.5	14.8	14.8	17.4	18.3	18.6	15.2	16.6	16.3
Tomatoes, canned.....No. 2 can..	13.3	12.6	12.5	10.2	10.3	10.4	13.0	13.9	13.5	11.0	9.7	9.6	11.4	12.8	13.2
Sugar, granulated.....pound..	6.8	6.4	6.4	6.7	6.6	6.6	7.2	7.2	7.1	6.9	6.8	6.7	7.2	7.0	7.1
Tea.....do.....	58.2	59.1	59.1	84.8	87.4	88.6	83.9	89.8	90.3	93.4	95.7	95.7	92.1	89.6	89.1
Coffee.....do.....	50.6	49.5	48.8	44.4	43.5	39.7	47.5	48.4	46.4	48.5	46.7	45.4	52.1	50.5	48.8
Prunes.....do.....	13.9	17.0	16.9	13.2	17.3	16.9	16.2	21.3	20.7	15.2	17.5	17.8	14.4	20.4	20.2
Raisins.....do.....	12.2	12.9	12.5	10.6	10.6	10.3	13.0	14.2	14.3	12.6	12.7	12.3	12.4	13.4	13.8
Bananas.....dozen..	9.8	9.0	9.2	26.1	25.7	30.0	31.3	31.3	34.0	27.5	26.9	10.9	10.7	10.5	10.5
Oranges.....do.....	47.8	43.2	44.0	43.9	32.8	35.2	47.0	42.0	43.5	20.0	33.7	33.7	51.1	36.1	40.0

¹ Per pound.

² The steak for which prices are here quoted is called "rump" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

WHOLESALE AND RETAIL PRICES

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TABLE 7.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, DECEMBER 15, 1928, AND NOVEMBER 15 AND DECEMBER 15, 1929—Contd.

Article	Little Rock, Ark.			Los Angeles, Calif.			Louisville, Ky.			Manchester, N. H.			Memphis, Tenn.		
	Dec. 15, 1928	1929		Dec. 15, 1928	1929		Dec. 15, 1928	1929		Dec. 15, 1928	1929		Dec. 15, 1928	1929	
		Nov. 15	Dec. 15		Nov. 15	Dec. 15		Nov. 15	Dec. 15		Nov. 15	Dec. 15		Nov. 15	Dec. 15
Sirloin steak.....pound..	42.9	46.7	47.0	45.5	45.6	44.6	42.9	43.6	44.1	62.4	63.3	61.5	47.6	48.2	48.3
Round steak.....do.....	39.5	44.6	43.5	38.3	38.2	37.8	37.5	39.1	38.6	53.2	51.3	51.3	43.8	44.8	44.9
Rib roast.....do.....	34.3	36.7	35.9	35.5	35.2	35.5	30.8	32.7	32.5	33.8	33.6	33.8	35.1	34.7	34.7
Chuck roast.....do.....	28.6	29.6	29.8	27.8	27.1	26.9	25.3	26.3	26.1	29.5	28.8	28.9	28.6	29.2	28.9
Plate beef.....do.....	21.4	22.6	23.7	21.0	18.4	18.5	21.9	21.8	22.5	24.4	21.1	21.2	21.8	22.4	22.4
Pork chops.....do.....	31.4	34.5	34.5	38.7	42.9	39.3	28.0	30.9	28.6	30.5	34.7	31.8	28.4	33.6	30.9
Bacon, sliced.....do.....	42.1	44.7	44.5	50.1	49.9	47.3	44.2	42.5	42.5	36.9	37.0	37.5	35.8	35.1	35.0
Ham, sliced.....do.....	51.5	51.0	51.0	67.6	66.9	65.9	48.8	49.1	49.1	45.5	45.4	45.3	52.1	52.6	51.9
Lamb, leg of.....do.....	37.6	39.0	38.0	37.6	37.2	36.9	37.0	37.0	40.8	37.7	37.5	36.9	36.7	37.6	38.3
Hens.....do.....	31.1	31.0	30.0	46.8	45.7	44.0	36.8	37.3	36.5	42.3	43.2	41.7	33.2	34.4	33.0
Salmon, canned, red pound..	32.8	31.8	32.6	30.2	30.0	30.1	30.5	30.3	30.3	30.2	30.8	31.0	32.9	34.4	34.4
Milk, fresh.....quart..	15.0	15.0	15.0	15.0	15.0	15.0	13.0	13.0	13.0	15.0	15.0	15.0	15.0	15.0	15.0
Milk, evaporated 16-ounce can..	11.6	11.1	10.9	10.0	9.8	9.7	11.8	10.6	10.6	12.6	12.0	12.1	11.5	10.6	10.3
Butter.....pound..	56.8	54.2	53.0	60.0	56.8	48.9	61.0	54.8	53.9	60.5	53.8	51.8	58.5	53.8	51.9
Oleomargarine (all butter substitutes) pound..	26.6	24.9	24.9	25.6	23.8	21.0	27.8	25.6	25.1	28.6	27.0	27.0	24.4	25.0	25.0
Cheese.....do.....	37.0	36.4	35.7	38.5	38.3	38.1	36.8	36.7	36.7	38.8	38.4	38.1	36.1	35.2	35.0
Lard.....do.....	20.0	19.0	18.9	20.6	19.2	18.1	17.7	17.2	16.8	17.8	17.5	17.2	16.2	15.1	14.2
Vegetable lard substitute.....pound..	20.8	21.1	21.3	24.2	23.7	22.2	26.4	26.2	25.8	26.5	26.0	26.3	21.7	22.0	22.1
Eggs, strictly fresh dozen	53.4	55.3	58.8	53.6	58.9	53.0	58.8	61.0	65.5	69.1	77.5	66.8	51.8	50.8	54.7
Bread.....pound..	9.4	9.5	9.5	8.6	8.5	8.5	9.2	9.2	8.6	8.7	8.1	8.1	9.4	9.2	9.2
Flour.....do.....	6.1	5.9	5.8	4.9	4.8	4.7	6.1	5.7	5.8	5.0	5.3	5.1	6.0	5.9	5.9
Corn meal.....do.....	4.0	4.3	4.0	5.8	5.7	5.6	4.1	4.2	4.0	5.2	5.5	5.6	3.9	4.0	4.0
Rolled oats.....do.....	10.6	10.5	10.5	9.9	9.8	9.6	8.7	8.4	8.7	8.6	8.3	8.3	8.9	8.8	8.7
Corn flakes 8-ounce package..	9.8	9.8	9.8	9.4	9.5	9.6	9.4	9.5	9.5	9.0	9.3	9.3	9.8	9.7	9.7
Wheat cereal 28-ounce package..	27.0	27.3	27.3	25.0	25.2	25.1	26.6	26.5	26.6	25.4	25.6	25.6	25.8	25.8	25.8
Macaroni.....pound..	20.2	20.1	20.2	18.1	17.8	17.1	18.5	18.7	18.7	23.2	23.4	23.4	19.5	19.1	19.2
Rice.....do.....	8.3	8.4	8.4	9.9	9.5	9.6	10.4	10.1	10.1	8.9	8.8	8.6	8.2	9.1	9.0
Beans, navy.....do.....	13.3	14.2	14.1	12.3	13.1	12.9	12.9	12.7	10.5	12.5	13.4	13.2	13.0	13.5	12.1
Potatoes.....do.....	2.8	4.1	4.2	2.6	3.9	3.9	2.1	3.7	3.5	1.7	3.3	3.2	3.0	4.1	4.0
Onions.....do.....	7.6	5.5	5.2	6.6	4.3	4.3	8.0	5.0	4.9	7.0	4.8	4.9	6.9	5.1	5.2
Cabbage.....do.....	5.4	4.5	4.8	5.5	4.5	4.4	4.8	4.6	4.5	4.8	4.0	4.2	4.3	3.8	4.2
Beans, baked No. 2 can..	11.5	12.3	12.2	11.3	11.9	11.4	11.2	11.4	11.1	13.6	13.5	13.6	11.3	11.6	11.5
Corn, canned.....do.....	16.3	16.5	16.5	16.3	15.0	15.4	15.3	15.2	15.1	16.2	16.2	16.2	14.6	14.7	14.7
Peas, canned.....do.....	18.2	17.7	17.7	17.0	16.4	15.9	15.3	15.0	15.0	17.8	17.5	17.5	15.0	15.7	15.8
Tomatoes, canned No. 2 can..	10.6	13.3	13.3	15.0	14.6	14.8	11.0	11.4	11.0	12.1	12.5	12.6	9.9	10.9	11.0
Sugar, granulated pound..	7.4	7.4	7.5	6.4	6.3	6.1	7.5	7.3	7.4	6.8	7.0	6.8	6.8	6.8	6.6
Tea.....do.....	105.7	103.4	104.6	74.9	72.2	72.7	93.8	91.2	91.2	65.8	60.8	60.8	96.6	95.2	94.8
Coffee.....do.....	54.6	53.9	52.9	54.0	52.4	51.5	51.6	48.7	45.4	50.9	49.9	48.2	48.9	48.3	47.4
Prunes.....do.....	16.3	18.6	20.8	13.5	18.7	18.5	15.8	17.9	18.5	13.1	16.3	16.7	14.0	16.0	16.7
Raisins.....do.....	14.0	14.3	14.3	10.5	10.9	11.0	11.7	13.1	13.0	10.8	11.2	11.5	12.5	13.5	13.3
Bananas.....dozen	9.4	9.5	9.8	8.8	9.5	8.7	10.1	9.9	9.5	9.5	8.9	9.3	9.4	8.5	8.2
Oranges.....do.....	48.9	43.0	46.0	48.5	49.4	40.4	36.9	40.6	41.2	50.1	46.6	43.5	35.4	39.2	38.0

¹ The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

² Per pound.

³ No. 2½ can.

TABLE 7.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, DECEMBER 15, 1928, AND NOVEMBER 15 AND DECEMBER 15, 1929—Contd.

Article	Milwaukee, Wis.			Minneapolis, Minn.			Mobile, Ala.			Newark, N. J.			New Haven, Conn.		
	1928		1929	1928		1929	1928		1929	1928		1929	1928		1929
	Dec. 15,	Nov. 15		Dec. 15,	Nov. 15		Dec. 15,	Nov. 15		Dec. 15,	Nov. 15		Dec. 15,	Nov. 15	
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak.....pound..	44.4	45.8	45.3	40.9	42.6	42.4	42.2	43.9	43.7	52.7	52.6	52.1	62.5	63.5	63.0
Round steak.....do.....	40.0	41.6	41.2	37.1	38.6	38.4	40.3	41.7	42.0	50.1	49.8	49.3	53.8	53.8	53.2
Rib roast.....do.....	32.4	32.9	32.3	33.0	33.7	33.8	32.2	33.9	34.2	43.3	40.4	40.0	41.5	42.6	42.3
Chuck roast.....do.....	29.8	30.9	30.7	28.8	28.6	29.6	26.1	28.3	28.1	31.8	33.2	32.7	34.5	34.4	34.4
Plate beef.....do.....	19.7	19.4	19.5	18.4	19.0	18.9	21.9	21.1	21.1	19.9	18.9	19.3	18.0	18.6	19.3
Pork chops.....do.....	28.4	32.1	30.9	31.5	34.8	34.1	29.4	31.9	31.1	33.4	36.4	35.1	32.5	37.6	35.0
Bacon, sliced.....do.....	43.7	43.7	43.2	46.4	45.5	45.4	40.4	39.0	37.8	43.3	43.0	43.7	45.4	45.6	44.3
Ham, sliced.....do.....	48.1	49.1	48.4	51.8	51.6	51.6	50.0	50.0	51.1	55.6	55.2	55.2	58.4	59.3	58.8
Lamb, leg of.....do.....	38.1	37.7	38.2	33.5	33.7	33.4	42.0	44.2	44.2	37.8	38.2	38.2	38.0	39.7	40.0
Hens.....do.....	34.0	32.0	31.6	35.4	33.3	33.3	33.0	35.8	34.2	38.4	39.0	37.4	41.6	42.6	41.2
Salmon, canned, red.....pound..	32.3	35.0	34.8	35.4	35.5	35.3	30.6	30.4	29.9	29.7	29.3	29.8	33.5	32.1	31.6
Milk, fresh.....quart.....	11.0	12.0	12.0	12.0	12.0	12.0	18.0	18.0	18.0	16.0	16.0	16.0	16.0	17.0	17.0
Milk, evaporated 16-ounce can.....	11.1	10.4	10.4	11.6	10.8	10.9	11.4	10.2	10.3	11.0	10.2	10.3	11.9	11.5	11.4
Butter.....pound.....	57.9	49.7	46.9	57.3	49.3	47.8	58.5	53.8	51.2	61.7	54.8	54.2	58.8	56.1	53.9
Oleomargarine (all butter substitutes).....pound..	26.7	26.5	27.1	26.4	25.7	24.4	29.5	27.2	27.2	30.0	30.9	30.8	29.0	29.1	28.9
Cheese.....do.....	37.7	36.6	36.6	37.4	37.0	37.1	36.1	34.2	34.8	40.3	41.3	40.6	41.6	41.6	41.7
Lard.....do.....	19.0	18.3	17.8	19.3	18.6	18.5	18.8	17.4	17.3	18.9	19.0	17.4	18.6	18.9	18.4
Vegetable lard substitute.....pound..	26.3	26.6	26.4	26.7	26.3	26.4	20.1	18.8	18.5	25.5	24.8	24.8	25.9	25.4	26.3
Eggs, strictly fresh.....dozen.....	54.3	58.2	57.0	47.4	57.1	55.4	52.4	51.6	56.4	65.8	73.7	72.8	79.5	79.5	77.8
Bread.....pound.....	8.7	8.4	8.4	8.9	8.8	8.9	10.1	9.9	9.9	9.1	9.0	9.0	8.8	8.6	8.6
Flour.....do.....	4.4	4.6	4.5	4.6	4.9	4.7	6.0	5.7	5.7	4.8	5.0	4.9	5.1	5.3	5.3
Corn meal.....do.....	5.9	6.2	6.3	5.7	5.7	5.6	4.0	3.9	3.9	6.7	6.5	6.5	6.7	6.9	7.1
Rolled oats.....do.....	8.2	8.1	8.0	7.7	8.0	8.0	8.5	8.1	8.1	8.1	8.6	8.6	9.3	9.1	9.0
Corn flakes.....do.....	9.2	9.4	9.3	9.4	9.4	9.4	9.4	8.8	9.0	8.8	8.9	8.9	10.0	10.0	10.0
Wheat cereal.....do.....	24.6	24.7	24.7	25.4	25.1	25.1	25.0	24.3	23.8	25.2	26.6	26.3	24.5	24.4	24.4
Macaroni.....pound.....	17.7	17.6	17.3	17.7	17.8	18.0	21.3	20.6	20.8	21.5	21.3	21.3	22.0	22.0	21.8
Rice.....do.....	10.2	9.9	9.6	9.5	10.1	9.6	8.1	7.5	7.5	9.1	9.6	9.0	10.2	10.3	10.2
Beans, navy.....do.....	13.3	13.5	13.1	13.3	14.0	13.2	12.2	14.4	13.7	13.0	14.9	14.3	12.0	13.9	13.2
Potatoes.....do.....	1.6	3.3	3.3	1.4	3.0	3.1	3.1	4.3	4.3	2.3	4.0	4.0	2.1	3.8	3.7
Onions.....do.....	7.1	4.7	4.6	7.1	5.0	5.0	6.5	4.4	4.8	7.7	5.4	5.1	7.3	5.5	6.0
Cabbage.....do.....	4.2	3.7	3.8	3.6	3.4	3.9	4.4	4.4	4.7	5.3	4.5	5.0	5.3	5.4	5.5
Beans, baked.....do.....	11.6	11.1	11.0	11.8	12.1	11.8	10.5	10.6	10.3	10.8	10.7	10.7	11.9	12.3	12.0
Corn, canned.....do.....	16.2	16.2	16.2	14.8	14.9	14.8	14.4	14.4	14.1	16.5	16.1	16.1	18.1	18.5	18.1
Peas, canned.....do.....	15.7	15.8	15.8	15.2	15.3	15.1	15.9	15.4	15.1	17.5	16.7	17.0	21.1	20.6	20.1
Tomatoes, canned.....do.....	13.6	14.1	14.3	12.9	14.2	14.2	9.8	10.9	10.8	11.0	10.8	10.9	13.4	14.3	14.2
Sugar, granulated.....pound..	6.5	6.6	6.3	6.7	6.8	6.7	6.4	6.5	6.3	6.4	6.4	6.2	6.6	6.8	6.7
Tea.....do.....	69.3	68.5	71.2	67.5	69.3	69.7	80.8	78.6	78.6	58.9	58.2	58.2	60.7	59.1	58.1
Coffee.....do.....	45.4	45.9	42.7	53.7	52.0	49.5	48.8	48.0	45.2	49.4	47.7	46.4	51.6	49.8	48.2
Prunes.....do.....	14.2	18.5	18.7	14.5	18.7	19.1	12.5	15.9	17.2	13.2	17.4	17.1	14.3	17.1	17.6
Raisins.....do.....	12.5	12.7	12.8	12.1	12.9	13.3	10.3	11.3	11.3	11.1	11.4	11.9	12.6	12.6	12.2
Bananas.....dozen.....	9.9	9.7	8.9	11.1	11.3	10.2	25.0	19.0	20.0	38.8	38.8	37.6	33.6	33.7	30.8
Oranges.....do.....	55.5	45.9	45.1	47.4	39.7	44.6	35.6	33.0	38.5	46.0	51.5	49.9	55.8	53.7	49.5

* Per pound.

TABLE 7.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, DECEMBER 15, 1928, AND NOVEMBER 15 AND DECEMBER 15, 1929—Contd.

Article	New Orleans, La.			New York, N. Y.			Norfolk, Va.			Omaha, Neb.			Peoria, Ill.		
	1928		1929	1928		1929	1928		1929	1928		1929	1928		1929
	Dec. 15, 1928	Nov. 15, 1928		Dec. 15, 1928	Nov. 15, 1928		Dec. 15, 1928	Nov. 15, 1928		Dec. 15, 1928	Nov. 15, 1928		Dec. 15, 1928	Nov. 15, 1928	
Sirloin steak.....pound.....	Cts. 42.4	Cts. 45.3	Cts. 45.2	Cts. 52.5	Cts. 52.7	Cts. 52.3	Cts. 46.8	Cts. 47.1	Cts. 46.5	Cts. 45.3	Cts. 45.5	Cts. 44.7	Cts. 38.9	Cts. 40.9	Cts. 39.7
Round steak.....do.....	38.2	40.3	40.0	50.0	49.8	49.5	40.9	41.1	40.6	41.6	43.8	42.6	37.7	40.3	39.0
Rib roast.....do.....	35.7	37.0	36.7	44.1	42.7	42.6	38.4	40.0	39.4	31.9	33.6	33.4	29.5	30.4	29.8
Chuck roast.....do.....	25.6	27.1	26.4	30.6	30.7	31.0	27.8	25.6	27.0	28.1	28.8	28.8	26.3	27.8	27.4
Plate beef.....do.....	22.9	23.1	23.3	25.7	25.4	25.6	20.3	21.1	21.0	19.0	19.1	19.0	18.7	19.3	18.8
Pork chops.....do.....	30.8	35.3	34.4	36.1	38.3	37.0	30.6	34.8	32.8	29.3	33.6	32.0	28.0	32.4	31.5
Bacon, sliced.....do.....	44.3	42.7	43.1	45.0	44.8	44.4	41.4	41.8	40.5	45.2	44.0	43.9	42.9	42.7	43.2
Ham, sliced.....do.....	48.5	52.5	51.7	57.5	57.3	57.0	46.3	45.6	44.2	51.8	51.8	50.9	49.2	49.1	48.6
Lamb, leg of.....do.....	37.7	38.5	39.2	35.8	36.6	36.6	40.0	40.8	39.7	35.3	36.5	36.0	37.6	42.1	42.1
Hens.....do.....	36.7	37.5	37.4	39.1	39.2	39.4	37.5	39.6	38.5	31.6	31.8	30.4	34.5	33.0	32.3
Salmon, canned, red pound.....	35.9	35.2	35.1	30.6	31.2	31.2	33.7	33.3	33.4	34.0	34.1	33.9	33.4	32.5	33.0
Milk, fresh.....quart.....	14.0	14.0	14.0	16.0	16.0	16.0	18.0	18.0	18.0	11.3	11.3	11.3	13.0	13.0	13.0
Milk, evaporated 16-ounce can.....	11.0	10.0	10.0	10.8	10.3	10.2	11.4	10.4	10.5	11.4	10.3	10.2	11.1	10.0	9.8
Butter.....pound.....	59.9	55.6	53.0	60.6	53.5	52.3	61.2	56.8	55.4	54.8	47.3	45.3	55.9	47.3	47.0
Oleomargarine (all butter substitutes) pound.....	28.5	27.9	27.3	28.6	28.5	27.9	26.7	26.3	26.5	26.9	26.0	25.2	27.0	27.5	27.2
Cheese.....do.....	38.9	36.8	36.7	40.5	41.1	40.2	35.3	35.1	35.3	36.3	35.8	35.4	36.2	35.8	35.8
Lard.....do.....	18.6	18.3	18.1	19.7	18.8	18.7	18.6	17.6	17.6	19.8	18.8	18.2	18.5	18.1	17.6
Vegetable lard substitute.....pound.....	19.4	20.3	19.9	15.7	25.4	25.2	21.6	21.7	21.8	25.4	25.1	25.3	27.6	27.9	27.6
Eggs, strictly fresh, dozen.....	50.4	55.1	58.1	70.6	75.6	74.7	60.3	63.3	63.2	47.4	50.6	53.4	57.0	57.4	59.9
Bread.....pound.....	8.8	8.8	8.7	8.6	8.7	8.6	9.9	9.3	9.3	9.7	9.2	9.2	10.0	10.0	10.0
Flour.....do.....	6.6	6.6	6.5	4.9	5.0	5.0	5.4	5.5	5.4	4.2	4.3	4.3	4.7	4.9	4.8
Corn meal.....do.....	4.2	4.1	4.1	6.7	6.7	6.7	4.8	4.7	4.8	4.6	4.7	4.8	4.9	5.0	4.9
Rollod oats.....do.....	8.6	8.6	8.6	8.7	8.7	8.6	8.7	8.6	8.6	10.2	9.5	9.5	8.6	8.6	8.5
Corn flakes 8-ounce package.....	9.4	9.4	9.4	9.0	9.0	9.2	9.7	9.6	9.6	10.1	9.8	9.8	9.6	9.5	9.5
Wheat cereal 28-ounce package.....	24.9	24.9	24.9	24.6	24.2	24.0	25.3	24.9	24.9	27.6	27.6	27.4	25.7	25.7	25.7
Macaroni.....pound.....	10.9	11.2	11.0	20.7	20.5	20.3	19.1	19.1	19.2	20.8	20.8	21.0	18.4	18.7	18.7
Rice.....do.....	8.7	8.8	8.6	9.9	9.5	9.4	10.7	10.2	10.0	10.9	10.0	10.0	10.1	9.2	9.2
Beans, navy.....do.....	11.9	13.2	12.8	13.3	15.3	15.0	12.4	13.5	12.0	13.4	13.4	12.6	12.8	13.4	12.8
Potatoes.....do.....	3.3	4.3	4.3	2.5	4.2	4.1	2.5	4.5	4.4	1.6	3.1	3.2	1.7	3.4	3.4
Onions.....do.....	6.4	4.4	4.6	7.1	5.4	5.2	7.5	5.2	5.5	7.0	4.9	4.9	7.4	5.9	5.6
Cabbage.....do.....	5.0	4.4	4.6	4.9	4.9	5.3	5.0	4.8	5.0	4.4	4.5	4.5	4.7	4.1	4.0
Beans, baked No. 2 can.....	10.8	11.2	10.7	11.4	11.5	11.5	10.7	10.0	10.1	13.3	13.1	13.1	10.6	10.3	10.5
Corn, canned.....do.....	15.6	15.5	15.2	14.8	15.1	15.1	15.1	14.8	15.5	15.6	15.8	15.5	14.6	13.9	13.9
Peas, canned.....do.....	16.1	15.9	15.5	15.3	15.3	15.1	17.4	17.8	17.9	15.5	14.9	14.8	17.4	17.0	17.0
Tomatoes, canned No. 2 can.....	11.0	11.6	11.4	11.5	11.3	11.1	10.2	9.7	10.3	13.4	14.3	14.5	12.3	13.4	12.6
Sugar, granulated pound.....	6.1	6.0	5.9	6.0	6.1	5.9	6.7	6.5	6.5	6.9	7.0	7.0	7.2	7.3	7.3
Ten.....do.....	80.9	83.6	81.5	67.1	68.5	67.2	94.7	93.3	93.3	77.0	80.0	80.0	66.3	64.2	64.1
Coffee.....do.....	34.9	35.5	33.9	45.4	44.1	41.2	51.0	48.8	46.1	53.6	53.6	52.8	49.4	47.7	45.5
Prunes.....do.....	13.8	18.9	19.1	13.5	16.9	17.3	14.0	15.7	17.4	14.8	18.4	18.8	15.4	18.6	18.8
Raisins.....do.....	10.0	11.3	11.2	11.8	12.4	12.7	11.5	12.0	12.2	13.0	13.4	13.8	12.2	13.5	13.6
Bananas.....dozen.....	17.5	17.0	18.0	38.7	39.6	37.5	29.2	32.5	32.3	11.4	11.7	11.8	9.8	10.1	9.8
Oranges.....do.....	49.4	39.6	49.2	56.8	58.8	57.3	46.2	49.8	51.6	48.7	31.9	37.2	51.7	39.3	39.2

¹ Per pound.

TABLE 7.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, DECEMBER 15, 1928, AND NOVEMBER 15 AND DECEMBER 15, 1929—Contd.

Article	Philadelphia, Pa.			Pittsburgh, Pa.			Portland, Me.			Portland, Oreg.		
	Dec. 15, 1928	1929		Dec. 15, 1928	1929		Dec. 15, 1928	1929		Dec. 15, 1928	1929	
		Nov. 15	Dec. 15		Nov. 15	Dec. 15		Nov. 15	Dec. 15		Nov. 15	Dec. 15
Sirloin steak.....pound.....	Cts. 62.4	Cts. 63.4	Cts. 62.7	Cts. 53.5	Cts. 53.4	Cts. 52.3	Cts. 67.8	Cts. 70.5	Cts. 68.2	Cts. 36.0	Cts. 37.3	Cts. 37.1
Round steak.....do.....	49.0	50.0	49.6	46.0	45.0	44.6	51.2	53.8	51.6	34.1	35.4	35.2
Rib roast.....do.....	41.7	42.2	42.4	39.7	38.5	38.5	35.6	37.8	34.8	29.6	30.5	30.3
Chuck roast.....do.....	34.5	33.5	34.0	32.7	31.4	31.1	26.4	28.4	27.2	25.0	25.3	25.0
Plate beef.....do.....	20.1	19.1	19.2	20.7	19.6	19.5	25.3	25.6	25.2	19.0	19.3	19.4
Pork chops.....do.....	35.4	38.7	36.4	31.0	36.0	35.0	31.1	37.0	33.8	34.3	36.9	36.3
Bacon, sliced.....do.....	42.0	42.1	41.9	47.1	46.4	46.0	40.6	38.7	37.9	50.3	51.3	50.1
Ham, sliced.....do.....	56.8	55.9	55.4	61.6	57.4	57.7	52.8	51.8	50.5	52.8	54.4	53.2
Lamb, leg of.....do.....	41.7	40.1	39.5	39.3	39.8	39.8	37.5	37.8	37.5	37.0	34.3	35.2
Hens.....do.....	41.9	39.9	39.5	46.1	46.4	44.6	41.9	42.3	40.8	35.1	36.3	35.8
Salmon, canned, red.....do.....	29.3	29.4	29.1	30.5	30.1	29.9	29.5	31.1	30.3	31.6	32.8	32.8
Milk, fresh.....quart.....	13.0	14.0	14.0	15.0	14.0	14.0	15.0	15.0	15.0	12.0	12.0	12.0
Milk, evaporated.....16-ounce can.....	11.5	10.5	10.4	11.0	10.3	10.2	12.3	11.6	11.6	10.1	10.1	10.1
Butter.....pound.....	62.8	55.6	56.5	61.7	54.3	52.0	60.8	55.9	53.5	58.6	55.6	51.4
Oleomargarine (all butter substitutes).....pound.....	29.0	28.4	28.2	28.7	27.7	27.8	26.9	25.6	25.6	26.1	25.8	26.0
Cheese.....do.....	42.1	42.8	42.2	41.3	40.6	40.4	40.1	38.7	38.9	38.5	38.3	38.1
Lard.....do.....	18.4	17.2	16.8	18.6	17.5	17.2	18.2	17.2	16.4	19.7	19.1	19.4
Vegetable lard substitute.....do.....	25.2	25.1	24.9	27.8	27.0	27.1	26.0	25.7	25.7	28.4	28.5	28.5
Eggs, strictly fresh.....dozen.....	64.6	69.0	70.9	63.3	64.8	67.4	66.9	75.1	68.3	49.4	57.6	52.8
Bread.....pound.....	8.4	8.3	8.3	9.0	8.8	8.9	9.4	8.9	9.0	9.3	9.3	9.3
Flour.....do.....	4.7	4.8	4.8	4.7	5.0	4.8	5.0	5.2	5.2	4.7	4.8	4.8
Corn meal.....do.....	5.2	5.9	5.6	5.9	6.3	6.4	5.3	5.3	5.3	5.8	6.0	6.2
Rolled oats.....do.....	8.3	8.3	8.3	9.1	8.9	8.9	7.9	7.6	7.6	10.4	10.1	10.4
Corn flakes.....8-ounce package.....	8.8	8.6	8.5	9.8	9.6	9.7	9.6	9.8	9.7	9.6	9.6	9.5
Wheat cereal.....28-ounce package.....	24.6	24.7	24.6	24.7	24.9	25.3	25.8	26.0	26.0	26.8	27.0	27.2
Macaroni.....pound.....	20.3	20.6	20.3	22.6	22.6	22.7	23.5	23.5	21.9	18.5	18.5	17.4
Rice.....do.....	10.4	10.2	10.1	11.3	10.4	10.3	11.0	11.0	11.2	10.0	10.2	9.9
Beans, navy.....do.....	12.2	14.3	13.5	12.7	13.2	12.6	12.3	14.2	12.9	12.7	13.8	13.3
Potatoes.....do.....	2.3	4.4	4.3	2.3	3.8	3.7	1.8	3.4	3.3	2.2	3.8	3.8
Onions.....do.....	6.9	4.5	4.4	7.5	5.3	5.9	7.5	4.4	4.5	5.7	3.4	3.2
Cabbage.....do.....	5.4	4.2	4.5	5.1	4.7	4.7	3.6	3.1	3.2	4.8	3.4	3.6
Beans, baked.....No. 2 can.....	11.4	10.6	10.6	13.0	12.3	12.3	15.0	15.5	15.5	12.2	13.3	13.0
Corn, canned.....do.....	15.5	14.9	14.7	16.5	16.0	15.9	14.2	14.4	14.3	17.9	18.3	19.1
Peas, canned.....do.....	16.1	15.9	15.7	17.2	16.5	16.5	17.8	17.9	17.5	17.0	17.9	18.2
Tomatoes canned.....do.....	12.0	12.4	12.1	12.4	13.4	13.1	11.7	12.5	13.0	15.6	16.1	15.5
Sugar, granulated.....pound.....	6.1	6.1	5.9	7.0	7.0	6.9	6.8	6.5	6.3	6.7	6.8	6.7
Tea.....do.....	69.0	72.8	72.5	80.9	87.8	86.6	62.4	61.5	62.5	78.0	77.8	78.1
Coffee.....do.....	43.9	42.8	40.1	49.2	49.3	47.9	52.8	51.9	48.0	53.2	52.0	50.4
Prunes.....do.....	12.0	16.2	16.3	14.5	18.6	18.5	12.2	16.7	17.2	13.4	13.7	13.8
Raisins.....do.....	11.0	11.8	11.6	12.0	12.7	12.5	11.0	11.3	11.3	11.2	13.0	12.1
Bananas.....dozen.....	30.3	29.7	28.4	41.9	37.3	36.1	11.0	10.8	10.6	10.9	11.1	11.5
Oranges.....do.....	44.2	45.6	42.5	49.6	44.7	41.1	47.8	51.2	48.4	45.8	31.7	30.3

¹ The steak for which prices are here quoted is called "sirloin" in this city, but in most other cities included in this report it would be known as "porterhouse" steak.

² Per pound.

³ No. 2½ can.

TABLE 7.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, DECEMBER 15, 1928, AND NOVEMBER 15 AND DECEMBER 15, 1929—Contd.

Article	Providence, R. I.			Richmond, Va.			Rochester, N. Y.			St. Louis, Mo.		
	1928		1929	1928		1929	1928		1929	1928		1929
	Dec. 15,	Nov. 15		Dec. 15,	Nov. 15		Dec. 15,	Nov. 15		Dec. 15,	Nov. 15	
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak.....pound	180.4	180.0	180.8	47.9	50.1	49.8	46.0	48.4	47.0	45.0	46.3	46.4
Round steak.....do	56.9	59.5	59.4	42.1	44.0	44.7	39.6	42.6	41.7	43.6	44.4	45.3
Rib roast.....do	44.5	44.6	44.0	35.7	36.8	35.6	34.1	36.3	35.4	35.9	37.0	37.1
Chuck roast.....do	35.7	36.5	36.5	28.5	30.2	28.0	30.5	30.7	31.0	28.8	29.3	29.4
Plate beef.....do	24.7	28.3	29.0	22.1	23.0	22.1	19.4	19.4	19.5	20.5	22.1	22.1
Pork chops.....do	35.0	38.6	37.1	30.9	36.1	32.8	31.5	38.2	35.9	26.0	33.1	30.1
Bacon, sliced.....do	40.7	40.6	40.7	38.5	38.9	37.1	38.7	37.8	37.4	39.6	40.6	40.6
Ham, sliced.....do	55.3	55.8	56.2	45.5	42.9	41.2	51.2	53.7	51.9	51.5	54.3	52.2
Lamb, leg of.....do	39.0	39.9	39.4	43.6	44.1	43.5	37.1	35.0	35.8	36.5	37.8	37.2
Hens.....do	41.9	42.7	42.8	36.4	35.6	34.6	40.5	39.9	39.3	35.7	34.9	35.0
Salmon, canned, red.....do	30.6	30.8	31.1	33.0	31.5	33.1	32.3	31.2	30.7	32.4	32.2	32.7
Milk, fresh.....quart	15.7	15.8	15.7	14.0	14.0	14.0	13.5	14.0	14.0	13.0	13.0	13.0
Milk, evaporated.....16-ounce can	11.8	11.1	10.8	12.3	11.8	11.8	11.5	10.5	10.3	10.8	9.6	9.6
Butter.....pound	57.6	54.2	52.4	63.3	54.7	53.5	59.1	52.8	50.8	62.1	54.7	51.5
Oleomargarine (all butter substitutes)pound	26.5	25.2	25.9	30.0	29.5	29.7	28.8	26.9	26.7	27.2	25.5	25.8
Cheese.....do	38.6	38.8	39.1	36.9	36.1	35.3	39.9	38.2	38.6	37.8	35.8	36.1
Lard.....do	18.0	17.1	16.9	18.3	17.0	16.3	17.7	17.0	16.6	15.2	14.4	13.6
Vegetable lard substitute.....do	26.3	26.2	25.6	25.6	24.9	24.9	26.0	25.4	25.4	25.4	25.2	24.8
Eggs, strictly fresh.....dozen	69.6	75.6	71.5	56.0	58.0	59.7	64.8	69.1	64.3	52.0	57.1	58.9
Bread.....pound	9.1	9.0	8.9	8.8	8.7	8.6	9.0	8.3	8.3	9.4	9.1	9.0
Flour.....do	5.2	5.5	5.4	5.2	5.3	5.2	5.0	5.1	5.0	4.8	4.9	4.9
Corn meal.....do	5.0	5.1	5.1	4.9	4.8	4.7	6.2	5.9	5.9	4.4	4.6	4.6
Rolled oats.....do	8.9	8.9	8.9	8.7	8.9	8.7	9.4	8.4	8.4	8.1	8.1	8.1
Corn flakes.....8-ounce package	9.6	9.4	9.4	9.6	9.6	9.8	9.2	9.2	9.3	9.1	9.5	9.4
Wheat cereal.....28-ounce package	24.8	24.8	24.6	26.0	25.9	25.9	25.7	25.1	24.9	24.7	24.3	24.2
Macaroni.....pound	22.8	23.0	23.1	20.2	20.6	20.2	20.5	19.9	20.2	19.9	19.7	19.1
Rice.....do	9.8	10.0	9.6	11.0	10.9	10.7	9.2	9.1	9.1	10.0	9.6	9.4
Beans, navy.....do	13.0	13.8	13.4	13.5	13.4	12.6	12.8	13.5	13.2	12.4	13.1	11.9
Potatoes.....do	1.8	3.4	3.4	2.5	4.2	4.1	1.5	3.0	3.0	2.4	4.0	4.0
Onions.....do	7.0	5.2	5.2	7.7	4.2	4.6	6.6	4.2	4.3	7.0	5.4	5.3
Cabbage.....do	5.1	4.6	4.9	4.7	4.3	4.5	3.4	2.7	3.1	4.4	3.8	4.2
Beans, baked.....No. 2 can	11.3	11.6	11.4	11.0	11.4	10.7	10.6	10.8	10.8	10.4	10.4	10.3
Corn, canned.....do	17.1	16.6	16.3	15.4	14.9	15.3	16.4	15.5	15.3	15.3	14.4	14.9
Peas, canned.....do	18.4	17.9	17.6	17.9	18.0	17.9	17.2	17.2	16.8	14.8	14.9	14.8
Tomatoes, canned.....do	12.9	13.0	12.9	10.9	11.5	11.5	14.8	15.4	15.5	11.1	12.2	12.3
Sugar, granulated.....pound	6.4	6.3	6.2	6.7	6.6	6.4	6.2	6.2	6.0	6.7	6.8	6.6
Tea.....do	60.6	59.4	59.1	91.9	94.5	94.5	71.6	72.8	71.9	78.6	73.3	73.3
Coffee.....do	52.4	51.1	48.3	47.6	47.1	45.3	49.1	45.1	41.0	47.6	44.7	41.5
Prunes.....do	13.7	16.2	16.2	14.7	18.1	18.3	14.2	18.6	19.7	15.2	19.0	19.1
Raisins.....do	12.6	12.0	11.9	11.4	12.5	12.1	12.5	12.5	12.5	11.4	12.2	12.1
Bananas.....dozen	31.9	32.5	31.3	36.5	33.8	33.8	36.7	31.3	32.1	32.5	31.4	31.7
Oranges.....do	54.8	54.9	50.7	40.4	39.1	39.2	52.0	52.1	55.5	48.5	43.6	44.4

¹ The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

TABLE 7.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, DECEMBER 15, 1928, AND NOVEMBER 15 AND DECEMBER 15, 1929—Contd.

Article	St. Paul, Minn.			Salt Lake City, Utah			San Francisco, Calif.			Savannah, Ga.		
	Dec. 15, 1928	1929		Dec. 15, 1928	1929		Dec. 15, 1928	1929		Dec. 15, 1928	1929	
		Nov. 15	Dec. 15		Nov. 15	Dec. 15		Nov. 15	Dec. 15		Nov. 15	Dec. 15
Sirloin steak.....pound..	Cts. 40.4	Cts. 41.4	Cts. 40.9	Cts. 38.1	Cts. 37.9	Cts. 36.8	Cts. 41.1	Cts. 39.8	Cts. 40.1	Cts. 40.5	Cts. 41.1	Cts. 40.9
Round steak.....do.....	36.4	36.4	36.2	37.5	36.7	36.2	40.1	38.0	38.2	34.5	36.7	36.4
Rib roast.....do.....	33.1	33.4	33.4	29.8	31.4	30.8	36.7	35.2	35.1	30.9	32.4	33.2
Chuck roast.....do.....	27.1	27.8	27.7	26.2	26.2	26.1	27.1	24.5	24.6	22.9	25.2	26.1
Plate beef.....do.....	17.5	18.3	18.6	19.3	19.4	19.0	22.0	19.3	19.8	18.8	22.3	20.6
Pork chops.....do.....	27.1	31.2	30.6	33.8	39.5	35.8	39.4	41.5	41.3	27.7	31.7	31.8
Bacon, sliced.....do.....	42.5	41.6	40.8	45.0	44.5	43.7	55.9	55.8	55.9	38.5	38.0	38.8
Ham, sliced.....do.....	46.4	46.7	46.1	55.9	56.8	55.7	62.8	62.9	62.4	44.6	45.0	45.8
Lamb, leg of.....do.....	29.8	30.9	32.3	36.7	36.0	36.3	39.0	38.8	38.5	37.5	37.8	37.9
Hens.....do.....	32.1	31.9	31.8	35.2	34.8	34.2	43.7	43.5	43.1	33.1	33.4	32.3
Salmon, canned, red.....do.....	35.3	36.4	36.9	33.2	33.2	32.9	28.4	29.6	29.7	33.0	33.1	32.6
Milk, fresh.....quart.....	12.0	12.0	12.0	10.0	10.0	10.0	14.0	14.0	14.0	17.5	18.0	18.0
Milk, evaporated.....16-ounce can..	11.9	11.0	10.7	10.2	10.0	10.0	10.0	9.9	9.9	11.2	10.1	10.1
Butter.....pound.....	56.6	49.4	48.1	54.6	51.4	47.9	59.9	58.4	52.8	60.0	52.4	52.4
Oleomargarine (all butter substitutes).....pound.....	24.4	23.6	24.0	25.0	30.0	29.8	25.3	24.9	24.9	30.5	30.0	29.8
Cheese.....do.....	36.8	35.5	35.4	31.3	29.8	29.8	39.9	41.1	41.1	35.4	33.0	32.8
Lard.....do.....	19.1	18.3	17.7	20.5	19.3	19.6	22.6	22.3	22.2	18.1	18.8	18.3
Vegetable lard substitute.....do.....	28.1	27.3	26.8	29.3	29.5	29.3	27.5	28.3	28.2	16.9	15.2	15.5
Eggs, strictly fresh.....dozen.....	46.4	50.9	51.3	51.3	58.1	52.5	49.7	59.3	52.7	56.2	59.8	57.6
Bread.....pound.....	9.3	9.3	9.3	9.6	9.6	9.5	9.1	9.3	9.3	10.7	10.4	10.4
Flour.....do.....	4.7	5.0	5.0	3.6	3.7	3.7	5.3	5.1	5.1	6.5	6.2	6.2
Corn meal.....do.....	5.1	5.3	5.5	5.9	6.0	6.0	7.2	7.2	7.2	3.5	3.6	3.5
Rolled oats.....do.....	10.1	10.0	9.7	8.6	8.4	8.4	10.1	9.8	9.8	8.3	8.6	8.6
Corn flakes.....8-ounce package..	10.1	10.0	10.0	10.2	9.7	9.8	9.7	9.7	9.8	9.8	9.6	9.5
Wheat cereal.....28-ounce package..	26.3	26.2	26.1	25.1	25.1	25.1	25.2	25.3	25.3	24.4	23.7	24.0
Macaroni.....pound.....	18.2	18.7	18.5	19.7	19.6	19.6	16.3	16.0	16.2	18.2	17.9	17.9
Rice.....do.....	10.9	10.4	10.4	8.7	9.4	9.2	9.6	9.8	9.8	8.7	8.7	8.8
Beans, navy.....do.....	13.7	14.3	13.8	11.3	12.1	11.6	11.6	13.6	13.3	13.9	15.0	14.5
Potatoes.....do.....	1.2	2.8	2.8	1.6	2.7	2.7	2.7	4.3	4.2	3.0	4.3	4.1
Onions.....do.....	6.9	4.4	4.6	4.7	3.1	3.1	5.7	4.3	4.3	7.5	5.7	5.2
Cabbage.....do.....	4.0	3.1	4.0	3.4	3.2	3.2				5.2	4.3	4.3
Beans, baked.....No. 2 can..	13.9	13.7	13.4	12.6	12.7	12.9	13.0	12.6	12.4	11.4	10.8	10.8
Corn, canned.....do.....	14.9	14.9	14.4	14.4	13.8	13.9	17.6	17.3	17.3	15.1	15.1	15.3
Peas, canned.....do.....	14.9	14.8	14.6	15.0	14.9	14.8	18.2	17.6	17.7	16.0	17.0	16.7
Tomatoes, canned.....do.....	14.2	14.7	14.5	13.7	13.5	13.8	14.7	16.0	16.1	10.0	9.9	9.7
Sugar, granulated.....pound.....	7.1	7.1	7.0	7.2	7.2	6.9	6.4	6.4	6.7	6.5	6.3	6.0
Tea.....do.....	67.0	72.7	70.7	85.4	84.7	84.7	71.3	74.1	74.1	75.3	82.5	82.1
Coffee.....do.....	52.8	52.9	51.4	54.3	55.1	53.9	54.4	52.1	51.2	47.3	44.9	41.9
Prunes.....do.....	14.5	18.1	18.2	13.2	15.7	17.5	11.6	15.6	15.7	13.3	18.0	18.8
Raisins.....do.....	13.8	14.2	14.2	12.1	11.8	11.8	10.3	10.9	11.1	11.8	12.5	12.6
Bananas.....dozen.....	10.9	11.2	10.7	12.7	11.4	10.2	29.7	30.7	30.7	28.5	31.1	30.0
Oranges.....do.....	53.9	40.4	43.6	45.6	36.2	35.3	52.2	35.3	37.8	30.5	36.3	33.6

¹ Per pound.⁴ No. 2½ can.

TABLE 7.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES, DECEMBER 15, 1928, AND NOVEMBER 15 AND DECEMBER 15, 1929—Contd.

Article	Scranton, Pa.			Seattle, Wash.			Springfield, Ill.			Washington, D. C.		
	1928		1929	1928		1929	1928		1929	1928		1929
	Dec. 15,	Nov. 15		Dec. 15,	Nov. 15		Dec. 15,	Nov. 15		Dec. 15,	Nov. 15	
	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak.....pound..	62.5	61.2	63.0	41.8	43.4	43.5	40.9	41.3	40.8	53.7	52.9	52.3
Round steak.....do.....	52.1	53.0	53.3	37.9	35.8	38.8	40.0	41.3	40.8	48.2	46.7	46.6
Rib roast.....do.....	44.5	41.7	41.5	33.8	34.4	34.1	30.9	32.1	31.9	39.2	38.1	38.8
Chuck roast.....do.....	36.2	35.6	35.5	27.1	26.7	26.7	27.4	28.7	28.5	31.3	31.5	31.5
Plate beef.....do.....	19.8	20.6	20.1	21.5	20.6	21.3	20.4	20.9	20.8	21.0	19.6	20.1
Pork chops.....do.....	33.6	40.7	37.8	35.1	40.8	40.1	25.5	30.6	31.4	31.6	36.6	34.2
Bacon, sliced.....do.....	47.3	46.9	46.3	54.8	53.1	52.8	41.4	41.6	40.5	40.4	40.1	38.6
Ham, sliced.....do.....	58.2	59.1	58.2	60.0	59.0	57.6	48.6	47.3	47.7	57.7	57.1	56.5
Lamb, leg of.....do.....	43.4	43.6	42.6	37.2	36.6	36.3	37.9	39.4	39.5	38.9	38.1	39.5
Hens.....do.....	43.8	44.3	42.2	36.1	36.3	36.3	34.7	33.7	32.4	41.6	40.3	40.2
Salmon, canned, red.....do.....	33.6	33.2	33.4	33.2	32.8	32.8	33.8	34.0	34.2	30.1	30.6	30.5
Milk, fresh.....quart.....	13.0	14.0	14.0	12.0	13.0	13.0	14.4	14.4	14.4	15.0	14.8	14.8
Milk, evaporated.....16-ounce can.....	11.9	11.4	11.3	10.3	10.1	10.0	12.0	10.6	10.3	11.8	11.0	11.1
Butter.....pound.....	59.9	56.0	54.4	56.4	54.4	53.1	58.6	51.7	48.7	61.7	55.7	53.0
Oleomargarine (all butter substitutes).....pound.....	27.3	26.8	26.8	25.4	24.7	24.7	27.8	27.3	27.5	26.9	26.3	26.0
Cheese.....do.....	39.3	38.9	38.7	35.5	35.5	35.8	36.8	36.5	35.8	41.1	39.5	39.5
Lard.....do.....	19.7	19.4	19.0	19.9	19.7	19.5	18.4	17.1	16.1	17.0	16.8	16.6
Vegetable lard substitute.....do.....	25.8	26.4	26.4	26.9	26.5	25.8	27.8	27.4	27.0	24.2	24.6	24.6
Eggs, strictly fresh.....dozen.....	70.4	70.9	71.0	47.7	58.8	54.4	54.5	58.9	63.3	63.4	67.7	66.9
Bread.....pound.....	9.9	9.8	9.8	9.6	9.7	9.7	10.1	10.1	10.1	8.9	8.9	8.9
Flour.....do.....	5.4	5.6	5.6	4.7	4.7	4.6	4.7	4.7	4.6	5.4	5.3	5.3
Corn meal.....do.....	7.6	7.7	7.4	5.8	6.3	6.1	4.8	4.8	4.8	5.2	5.0	5.0
Rollod oats.....do.....	9.8	9.9	9.9	8.7	9.6	9.7	9.9	9.5	9.7	9.1	8.7	8.9
Corn flakes.....8-ounce package.....	9.9	9.8	9.8	9.8	9.8	9.8	9.7	9.5	9.5	9.3	9.1	8.9
Wheat cereal.....28-ounce package.....	25.4	25.5	25.5	26.6	26.4	26.3	28.8	27.1	26.8	24.9	24.4	24.4
Macaroni.....pound.....	22.3	22.5	22.8	17.8	17.0	17.5	19.0	18.5	18.8	22.0	21.6	21.6
Rice.....do.....	10.2	10.1	10.1	10.3	10.1	10.1	10.2	9.9	9.8	11.2	10.7	10.7
Beans, navy.....do.....	12.3	14.1	14.0	12.6	14.1	13.7	12.9	13.4	11.9	12.8	13.3	12.5
Potatoes.....do.....	1.8	3.6	3.6	1.8	3.3	3.4	1.8	3.6	3.5	2.4	3.9	4.0
Onions.....do.....	6.5	4.7	4.8	5.9	3.4	3.5	7.6	4.5	5.3	7.6	5.2	4.8
Cabbage.....do.....	4.5	3.4	3.5	5.2	3.3	3.3	4.5	3.5	4.3	5.5	4.3	5.0
Beans, baked.....No. 2 can.....	11.9	12.2	12.1	11.0	12.4	12.4	11.2	11.0	11.1	10.8	10.6	10.6
Corn, canned.....do.....	16.8	16.8	16.5	18.0	17.0	17.4	14.9	15.0	15.0	15.6	15.2	15.2
Peas, canned.....do.....	17.9	17.8	17.8	18.1	17.7	18.0	15.7	16.1	15.5	14.9	16.6	16.6
Tomatoes, canned.....do.....	12.7	13.3	13.3	15.9	16.2	15.9	14.0	14.4	13.6	10.5	10.5	10.5
Sugar, granulated.....pound.....	6.8	6.7	6.6	6.6	6.5	6.5	7.3	7.0	7.0	6.2	6.3	6.1
Tea.....do.....	68.1	66.1	66.1	77.1	78.0	78.0	83.1	83.1	81.9	95.2	90.1	89.9
Coffee.....do.....	50.7	49.4	47.9	52.1	49.5	49.1	51.6	51.6	49.6	47.3	45.2	42.1
Prunes.....do.....	14.3	17.8	17.7	13.1	16.8	16.6	14.2	19.5	19.6	15.4	18.4	18.9
Raisins.....do.....	11.9	12.3	12.4	10.8	11.2	11.7	11.6	12.3	12.6	12.4	13.3	13.3
Bananas.....dozen.....	30.4	28.8	29.6	10.9	10.5	10.1	9.4	9.3	8.3	31.8	30.5	30.0
Oranges.....do.....	59.9	46.9	47.3	44.6	34.0	36.0	53.8	44.5	43.5	40.4	41.3	44.2

¹ Per pound.

⁴ No. 2½ can.

Comparison of Retail Food Costs in 51 Cities

TABLE 8 shows for 39 cities the percentage of increase or decrease in the retail cost of food ³ in December, 1929, compared with the average cost in the year 1913, in December, 1928, and November, 1929. For 12 other cities comparisons are given for the 1-year and the 1-month periods; these cities have been scheduled by the bureau at different dates since 1913. The percentage changes are based on actual retail prices secured each month from retail dealers and on the average family consumption of these articles in each city.⁴

Effort has been made by the bureau each month to have all schedules for each city included in the average prices. For the month of December, 99.2 per cent of all the firms supplying retail prices in the 51 cities sent in a report promptly. The following-named 40 cities had a perfect record; that is, every merchant who is cooperating with the bureau sent in his report in time for his prices to be included in the city averages: Atlanta, Birmingham, Bridgeport, Buffalo, Butte, Cincinnati, Cleveland, Columbus, Denver, Fall River, Indianapolis, Jacksonville, Kansas City, Louisville, Manchester, Memphis, Milwaukee, Minneapolis, Mobile, Newark, New Haven, New Orleans, New York, Norfolk, Omaha, Peoria, Philadelphia, Portland, Me., Portland, Oreg., Providence, Richmond, Rochester, St. Louis, St. Paul, Salt Lake City, San Francisco, Savannah, Scranton, Springfield, Ill., and Washington.

TABLE 8.—PERCENTAGE CHANGE IN THE RETAIL COST OF FOOD IN DECEMBER, 1929, COMPARED WITH THE COST IN NOVEMBER, 1929, DECEMBER, 1928, AND WITH THE AVERAGE COST IN THE YEAR 1913, BY CITIES

City	Percentage increase December, 1929, compared with—		Percentage decrease December, 1929, compared with November, 1929	City	Percentage increase December, 1929, compared with—		Percentage decrease December, 1929, compared with November, 1929
	1913	December, 1928			1913	December, 1928	
Atlanta.....	58.1	* 2.8	1.4	Minneapolis.....	59.2	3.2	0.6
Baltimore.....	62.2	3.1	.9	Mobile.....		* 4	.0
Birmingham.....	60.3	* .6	1.3	Newark.....	53.7	1.8	.9
Boston.....	60.2	1.8	1.5	New Haven.....	61.7	1.9	1.4
Bridgeport.....		1.3	.8	New Orleans.....	58.0	1.4	.5
Buffalo.....	63.1	1.9	1.0	New York.....	61.7	1.2	1.2
Butte.....		2.4	.6	Norfolk.....		.5	1.2
Charleston, S. C.....	60.4	1.5	1.2	Omaha.....	51.1	1.7	.4
Chicago.....	71.6	3.0	* 7	Peoria.....		2.2	.8
Cincinnati.....	65.0	4.1	.9	Philadelphia.....	63.2	2.9	.5
Cleveland.....	50.6	* 1.0	2.5	Pittsburgh.....	59.6	* 1.0	.6
Columbus.....		1.6	1.3	Portland, Me.....		* 3	2.9
Dallas.....	59.0	* .8	* 7	Portland, Oreg.....	45.2	1.3	2.2
Denver.....	41.9	* .5	.4	Providence.....	60.0	1.5	1.6
Detroit.....	62.8	1.4	1.1	Richmond.....	61.9	* 3	1.6
Fall River.....	56.4	* 1	1.2	Rochester.....		* 6	1.9
Houston.....		2.9	* 8	St. Louis.....	61.1	1.7	1.2
Indianapolis.....	56.2	2.3	.9	St. Paul.....		2.7	.5
Jacksonville.....	46.3	.6	.7	Salt Lake City.....	35.9	* 3	2.9
Kansas City.....	56.1	4.0	.6	San Francisco.....	55.3	.5	2.3
Little Rock.....	53.3	1.6	.6	Savannah.....		.2	1.3
Los Angeles.....	43.9	* 2.6	3.9	Scranton.....	67.7	2.1	.7
Louisville.....	54.5	* 1.2	1.4	Seattle.....	51.8	3.6	1.0
Manchester.....	53.1	* 1.4	2.8	Springfield, Ill.....		2.5	.5
Memphis.....	51.3	* 2	.7	Washington.....	63.2	* 5	1.1
Milwaukee.....	60.0	2.4	1.6				

* Decrease.

* Increase.

³ For list of articles, see note 1, p. 3.

⁴ The consumption figures used from January, 1913, to December, 1920, for each article in each city are given in the Labor Review for November, 1918, pp. 94 and 95. The consumption figures which have been used for each month beginning with January, 1921, are given in the Labor Review for March, 1921, p. 26.

Retail Prices of Coal in the United States⁵

THE following table shows the average retail prices of coal on December 15, 1928, and November 15 and December 15, 1929, for the United States and for each of the cities from which retail food prices have been obtained. The prices quoted are for coal delivered to consumers, but do not include charges for storing the coal in cellar or coal bin where an extra handling is necessary.

In addition to the prices for Pennsylvania anthracite, prices are shown for Colorado, Arkansas, and New Mexico anthracite in those cities where these coals form any considerable portion of the sales for household use.

The prices shown for bituminous coal are averages of prices of the several kinds sold for household use.

TABLE 1.—AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON DECEMBER 15, 1928, AND NOVEMBER 15 AND DECEMBER 15, 1929

City, and kind of coal	1928	1929		City, and kind of coal	1928	1929	
	Dec. 15	Nov. 15	Dec. 15		Dec. 15	Nov. 15	Dec. 15
United States:				Cincinnati, Ohio:			
Pennsylvania anthracite—				Bituminous—			
Stove—				Prepared sizes—			
Average price.....	\$15.40	\$15.31	\$15.34	High volatile.....	\$5.57	\$6.20	\$6.30
Index (1913=100).....	199.3	198.2	198.5	Low volatile.....	7.47	8.63	8.78
Chestnut—				Cleveland, Ohio:			
Average price.....	\$15.07	\$14.98	\$15.00	Pennsylvania anthracite—			
Index (1913=100).....	190.4	189.3	189.6	Stove.....	15.35	15.22	15.24
Bituminous—				Chestnut.....	14.97	14.80	14.80
Average price.....	\$9.11	\$9.00	\$9.05	Bituminous—			
Index (1913=100).....	167.6	165.6	166.5	Prepared sizes—			
Atlanta, Ga.:				High volatile.....	7.26	7.05	7.10
Bituminous, prepared sizes.	\$8.00	\$7.80	\$7.79	Low volatile.....	10.03	9.97	9.97
Baltimore, Md.:				Columbus, Ohio:			
Pennsylvania anthracite—				Bituminous—			
Stove.....	16.00	14.25	14.25	Prepared sizes—			
Chestnut.....	15.50	13.75	13.75	High volatile.....	5.82	5.95	5.95
Bituminous, run of mine—				Low volatile.....	8.13	8.31	8.31
High volatile.....	8.00	7.82	7.96	Dallas, Tex.:			
Birmingham, Ala.:				Arkansas anthracite—Egg.....	15.75	15.75	15.50
Bituminous, prepared sizes.	7.68	7.62	7.64	Bituminous, prepared sizes.	13.08	12.83	12.92
Boston, Mass.:				Denver, Colo.:			
Pennsylvania anthracite—				Colorado anthracite—			
Stove.....	16.25	16.00	16.00	Furnace, 1 and 2 mixed.....	16.00	14.75	14.75
Chestnut.....	16.00	15.50	15.50	Stove, 3 and 5 mixed.....	16.00	14.75	14.75
Bridgeport, Conn.:				Bituminous, prepared sizes.	10.57	10.34	10.45
Pennsylvania anthracite—				Detroit, Mich.:			
Stove.....	15.50	15.50	15.50	Pennsylvania anthracite—			
Chestnut.....	15.50	15.50	15.50	Stove.....	16.00	16.00	16.00
Buffalo, N. Y.:				Chestnut.....	15.50	15.50	15.50
Pennsylvania anthracite—				Bituminous—			
Stove.....	14.02	13.77	13.77	Prepared sizes—			
Chestnut.....	13.53	13.32	13.32	High volatile.....	8.31	8.39	8.39
Butte, Mont.:				Low volatile.....	10.38	10.36	10.34
Bituminous, prepared sizes.	10.91	11.17	11.17	Run of mine—			
Charleston, S. C.:				Low volatile.....	8.00	8.00	8.00
Bituminous, prepared sizes.	9.67	9.67	9.67	Fall River, Mass.:			
Chicago, Ill.:				Pennsylvania anthracite—			
Pennsylvania anthracite—				Stove.....	16.50	16.50	16.50
Stove.....	16.90	16.85	16.85	Chestnut.....	16.25	16.25	16.25
Chestnut.....	16.45	16.40	16.40	Houston, Tex.:			
Bituminous—				Bituminous prepared sizes.....	13.20	12.20	13.20
Prepared sizes—				Indianapolis, Ind.:			
High volatile.....	8.45	8.45	8.47	Bituminous—			
Low volatile.....	11.85	12.35	12.35	Prepared sizes—			
Run of mine—				High volatile.....	6.37	6.20	6.15
Low volatile.....	8.25	8.25	8.25	Low volatile.....	9.11	9.04	9.00
				Run of mine—			
				Low volatile.....	7.00	7.25	7.17

* Per ton of 2,240 pounds.

⁵ Prices of coal were formerly secured semiannually and published in the March and September issues of the Labor Review. Since June, 1920, these prices have been secured and published monthly.

TABLE 1.—AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON DECEMBER 15, 1928, AND NOVEMBER 15 AND DECEMBER 15, 1929—Continued

City, and kind of coal	1928	1929		City, and kind of coal	1928	1929	
	Dec. 15	Nov. 15	Dec. 15		Dec. 15	Nov. 15	Dec. 15
Jacksonville, Fla.: Bituminous, prepared sizes	\$12.00	\$14.00	\$14.00	Pittsburgh, Pa.: Pennsylvania anthracite— Chestnut	\$15.00	\$15.00	\$15.00
Kansas City, Mo.: Arkansas anthracite— Furnace	12.60	12.45	12.55	Bituminous, prepared sizes	5.25	5.29	5.29
Stove No. 4	14.33	13.58	13.58	Portland, Me.: Pennsylvania anthracite— Stove	16.80	16.80	16.80
Bituminous, prepared sizes	7.28	7.23	7.10	Chestnut	16.80	16.80	16.80
Little Rock, Ark.: Arkansas anthracite—Egg	13.50	13.50	13.50	Portland, Oreg.: Bituminous, prepared sizes	13.40	13.46	13.49
Bituminous, prepared sizes	10.25	10.00	10.10	Providence, R. I.: Pennsylvania anthracite— Stove	16.00	16.00	16.00
Los Angeles, Calif.: Bituminous, prepared sizes	16.25	16.50	16.50	Chestnut	16.00	16.00	16.00
Louisville, Ky.: Bituminous— Prepared sizes— High volatile	7.16	6.60	7.08	Richmond, Va.: Pennsylvania anthracite— Stove	15.00	15.00	15.00
Low volatile	9.75	9.00	9.50	Chestnut	15.00	15.00	15.00
Manchester, N. H.: Pennsylvania anthracite— Stove	17.25	17.00	17.00	Bituminous— Prepared sizes— High volatile	8.38	8.38	8.38
Chestnut	17.00	17.00	17.00	Low volatile	9.78	9.11	9.14
Memphis, Tenn.: Bituminous, prepared sizes	7.46	7.39	7.39	Run of mine— Low volatile	7.50	7.25	7.25
Milwaukee, Wis.: Pennsylvania anthracite— Stove	16.30	16.30	16.30	Rochester, N. Y.: Pennsylvania anthracite— Stove	14.75	14.75	14.75
Chestnut	15.90	15.85	15.85	Chestnut	14.25	14.25	14.25
Bituminous— Prepared sizes— High volatile	7.80	7.68	7.68	St. Louis, Mo.: Pennsylvania anthracite— Stove	16.75	16.65	16.65
Low volatile	11.08	10.99	11.01	Chestnut	16.45	16.40	16.40
Minneapolis, Minn.: Pennsylvania anthracite— Stove	18.28	18.30	18.30	Bituminous, prepared sizes	6.25	6.69	6.69
Chestnut	17.90	17.85	17.85	St. Paul, Minn.: Pennsylvania anthracite— Stove	18.30	18.30	18.30
Bituminous— Prepared sizes— High volatile	10.93	10.52	10.56	Chestnut	17.90	17.85	17.85
Low volatile	13.50	13.65	13.65	Bituminous— Prepared sizes— High volatile	10.70	10.26	10.27
Mobile, Ala.: Bituminous, prepared sizes	9.77	9.50	9.63	Low volatile	13.50	13.65	13.65
Newark, N. J.: Pennsylvania anthracite— Stove	14.00	13.96	13.96	Salt Lake City, Utah: Colorado anthracite— Furnace, 1 and 2 mixed	18.00	18.00	18.00
Chestnut	13.50	13.46	13.46	Stove, 3 and 5 mixed	18.00	18.00	18.00
New Haven, Conn.: Pennsylvania anthracite— Stove	14.90	14.96	15.33	Bituminous, prepared sizes	7.93	7.93	8.38
Chestnut	14.90	14.96	15.33	San Francisco, Calif.: New Mexico anthracite— Cerrillos egg	26.00	26.00	26.00
New Orleans, La.: Bituminous, prepared sizes	11.21	10.96	10.96	Colorado anthracite— Egg	25.50	25.50	25.50
New York, N. Y.: Pennsylvania anthracite— Stove	14.79	14.54	14.58	Bituminous, prepared sizes	16.75	17.13	17.13
Chestnut	14.29	14.08	14.08	Savannah, Ga.: Bituminous, prepared sizes	10.62	10.44	10.24
Norfolk, Va.: Pennsylvania anthracite— Stove	15.00	14.00	14.00	Scranton, Pa.: Pennsylvania anthracite— Stove	10.53	10.28	10.28
Chestnut	15.00	14.00	14.00	Chestnut	10.33	9.92	9.92
Bituminous— Prepared sizes— High volatile	7.88	7.25	7.25	Seattle, Wash.: Bituminous, prepared sizes	10.48	10.68	10.68
Low volatile	10.50	9.00	9.00	Springfield, Ill.: Bituminous, prepared sizes	4.24	4.34	4.34
Run of mine— Low volatile	7.00	6.83	6.67	Washington, D. C.: Pennsylvania anthracite— Stove	15.63	15.73	15.73
Omaha, Nebr.: Bituminous, prepared sizes	9.56	9.61	9.69	Chestnut	15.13	15.23	15.23
Peoria, Ill.: Bituminous, prepared sizes	6.91	6.72	6.75	Bituminous— Prepared sizes: High volatile	9.25	8.63	8.63
Philadelphia, Pa.: Pennsylvania anthracite— Stove	14.67	15.00	15.00	Low volatile	11.42	11.42	11.42
Chestnut	14.11	14.50	14.50	Run of mine— Mixed	7.63	7.75	7.72

¹ Per ton of 2,240 pounds.² The average price of coal delivered in bin is 50 cents higher than here shown. Practically all coal is delivered in bin.³ All coal sold in Savannah is weighed by the city. A charge of 10 cents per ton or half ton is made. This additional charge has been included in the above price.

The following table shows for the United States both average and relative retail prices of Pennsylvania white-ash anthracite coal, stove and chestnut sizes, and of bituminous coal in January and July, 1913 to 1927, and for each month of 1928 and 1929. An average price for the year 1913 has been made from the averages for January and July of that year. The average price for each month has been divided by this average price for the year 1913 to obtain the relative price.

TABLE 2.—AVERAGE AND RELATIVE PRICES OF COAL FOR THE UNITED STATES ON SPECIFIED DATES FROM JANUARY, 1913, TO DECEMBER, 1929

Year and month	Pennsylvania anthracite, white ash—				Bituminous	
	Stove		Chestnut		Average price	Relative price
	Average price	Relative price	Average price	Relative price		
1913: Average for year.....	\$7.73	100.0	\$7.91	100.0	\$5.43	100.0
January.....	7.99	103.4	8.15	103.0	5.48	100.8
July.....	7.46	96.6	7.68	97.0	5.39	99.2
1914: January.....	7.80	100.9	8.00	101.0	5.97	109.9
July.....	7.60	98.3	7.78	98.3	5.46	100.6
1915: January.....	7.83	101.4	7.99	101.0	5.71	105.2
July.....	7.54	97.6	7.73	97.7	5.44	100.1
1916: January.....	7.93	102.7	8.13	102.7	5.69	104.8
July.....	8.12	105.2	8.28	104.6	5.52	101.6
1917: January.....	9.29	120.2	9.40	118.8	6.96	128.1
July.....	9.08	117.5	9.16	115.7	7.21	132.7
1918: January.....	9.88	127.9	10.03	126.7	7.68	141.3
July.....	9.96	128.9	10.07	127.3	7.92	145.8
1919: January.....	11.51	149.0	11.61	146.7	7.90	145.3
July.....	12.14	157.2	12.17	153.8	8.10	149.1
1920: January.....	12.59	162.9	12.77	161.3	8.81	162.1
July.....	14.28	184.9	14.33	181.1	10.55	194.1
1921: January.....	15.99	207.0	16.13	203.8	11.82	217.6
July.....	14.90	192.8	14.95	188.9	10.47	192.7
1922: January.....	14.98	193.9	15.02	189.8	9.89	182.0
July.....	14.87	192.4	14.92	188.5	9.49	174.6
1923: January.....	15.43	199.7	15.46	195.3	11.18	205.7
July.....	15.10	195.5	15.05	190.1	10.04	184.7
1924: January.....	15.77	204.1	15.76	199.1	9.75	179.5
July.....	15.24	197.2	15.10	190.7	8.94	164.5
1925: January.....	15.45	200.0	15.37	194.2	9.24	170.0
July.....	15.14	196.0	14.93	188.6	8.61	158.5
1926: January.....	(¹)	(¹)	(¹)	(¹)	9.74	179.3
July.....	15.43	199.7	15.19	191.9	8.70	160.1
1927: January.....	15.66	202.7	15.42	194.8	9.96	183.3
July.....	15.15	196.1	14.81	187.1	8.91	163.9
1928: January.....	15.44	199.8	15.08	190.6	9.30	171.1
February.....	15.44	199.9	15.09	190.6	9.28	170.8
March.....	15.43	199.8	15.08	190.5	9.26	170.4
April.....	14.95	193.4	14.64	185.0	8.94	164.6
May.....	14.74	190.8	14.46	182.7	8.69	159.9
June.....	14.89	192.7	14.61	184.6	8.72	160.4
July.....	14.91	192.9	14.63	184.9	8.69	159.9
August.....	14.95	193.5	14.76	186.5	8.74	160.9
September.....	15.21	196.9	14.93	188.7	8.84	162.6
October.....	15.26	197.6	14.98	189.3	8.96	164.8
November.....	15.38	199.1	15.06	190.3	9.07	166.9
December.....	15.40	199.3	15.07	190.4	9.11	167.6
1929: January.....	15.38	199.1	15.06	190.3	9.09	167.2
February.....	15.40	199.3	15.07	190.4	9.07	166.9
March.....	15.39	199.2	15.07	190.4	9.06	166.7
April.....	15.04	194.6	14.71	185.8	8.76	161.3
May.....	14.74	190.7	14.40	182.0	8.52	156.8
June.....	14.82	191.8	14.48	183.0	8.50	156.5
July.....	14.94	193.4	14.63	184.8	8.62	158.6
August.....	15.01	194.3	14.67	185.4	8.69	159.9
September.....	15.21	196.8	14.87	187.9	8.87	163.2
October.....	15.31	198.2	14.98	189.3	8.98	165.3
November.....	15.31	198.2	14.98	189.3	9.00	165.6
December.....	15.34	198.5	15.00	189.6	9.05	166.5

¹ Insufficient data.

Retail Prices of Gas in the United States

THE net price per 1,000 cubic feet of gas for household use in each of 51 cities is shown in the following table. In Table 1 the average family consumption of manufactured gas is assumed to be 3,000 cubic feet per month. In cities where a service charge or a sliding scale is in operation, families using less than 3,000 cubic feet per month pay a somewhat higher rate than here shown, while those consuming more than this amount pay a lower rate. The figures here given are believed to represent quite closely the actual monthly cost of gas per 1,000 cubic feet to the average wage-earner's family. Prices for natural gas and for manufactured and natural mixed gas are shown in Table 2 for those cities where it is in general use. These prices are based on an estimated average family consumption of 5,000 cubic feet per month.

TABLE 1.—NET PRICE PER 1,000 CUBIC FEET OF MANUFACTURED GAS BASED ON A FAMILY CONSUMPTION OF 3,000 CUBIC FEET, IN SPECIFIED MONTHS FROM APRIL, 1913, TO DECEMBER, 1929, BY CITIES

City	Apr. 15, 1913	June 15, 1923	June 15, 1924	June 15, 1925	June 15, 1926	June 15, 1927	Dec. 15, 1927	June 15, 1928	Dec. 15, 1928	June 15, 1929	Dec. 15, 1929
Atlanta.....	\$1.00	\$1.65	\$1.55	\$1.55	\$1.55	\$1.55	\$1.55	\$1.55	\$1.55	\$1.43	\$1.43
Baltimore.....	.90	.92	.85	.85	.85	.85	.85	.85	.85	.85	.85
Birmingham.....	1.00	.80	.80	.80	.80	.80	.80	.80	.80	.80	.80
Boston.....	.81	1.25	1.20	1.18	1.18	1.18	1.18	1.18	1.18	1.18	1.16
Butte.....	1.49	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10
Charleston, S. C.....	1.10	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55
Chicago.....	.80	1.07	1.02	1.02	1.02	1.02	1.02	.98	.98	.98	.98
Cleveland.....	.80	.80	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Denver.....	.85	.95	.95	.95	.95	.90	.90	.90	.90	.90	.90
Detroit.....	.75	.79	.82	.82	.79	.79	.79	.79	.79	.79	.79
Fall River.....	.80	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.15	1.14
Houston.....	1.00	1.09	1.09	1.05	1.05	1.05	.95	.95	.95	.95	.95
Indianapolis.....	.60	1.15	1.15	1.10	1.05	1.05	.95	.95	.95	.95	.95
Jacksonville.....	1.20	1.65	1.97	1.97	1.97	1.92	1.92	1.92	1.92	1.92	1.92
Manchester.....	1.10	1.48	1.38	1.38	1.38	1.38	1.38	1.34	1.34	1.34	1.34
Memphis.....	1.00	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Milwaukee.....	.75	.86	.82	.82	.82	.82	.82	.82	.82	.82	.82
Minneapolis.....	.85	1.05	1.01	.95	.97	.96	.94	.94	.90	.89	.89
Mobile.....	1.10	1.80	1.80	1.80	1.80	1.76	1.76	1.76	1.76	1.76	1.76
Newark.....	1.00	1.25	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.21
New Haven.....	.90	1.18	1.18	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
New Orleans.....	1.10	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30
New York.....	.84	1.23	1.23	1.23	1.23	1.24	1.24	1.25	1.25	1.25	1.24
Norfolk.....	1.00	1.40	1.40	1.40	1.33	1.33	1.33	1.33	1.33	1.33	1.32
Omaha.....	1.15	1.18	1.18	1.08	1.08	1.08	1.00	1.00	1.00	1.00	1.00
Peoria.....	.90	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Philadelphia.....	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Portland, Me.....	1.10	1.55	1.55	1.55	1.50	1.42	1.42	1.42	1.42	1.42	1.42
Portland, Oreg.....	.95	1.16	1.16	1.16	1.19	1.17	1.17	1.17	1.17	1.17	1.17
Providence.....	.85	1.22	1.22	1.17	1.17	1.13	1.13	1.13	1.13	1.13	1.13
Richmond.....	.90	1.30	1.30	1.30	1.29	1.29	1.29	1.29	1.29	1.29	1.29
Rochester.....	.95	1.05	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
St. Louis.....	.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.11	1.11
St. Paul.....	.95	.85	.85	.85	.90	.90	.90	.90	.90	.90	.90
Salt Lake City.....	.87	1.57	1.57	1.54	1.53	1.52	1.52	1.51	1.51	1.51	1.51
San Francisco.....	.75	.92	1.00	1.05	.95	.95	.95	.94	.94	.90	.90
Savannah.....		1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45
Scranton.....	.95	1.00	1.50	1.50	1.50	1.40	1.40	1.40	1.40	1.40	1.40
Seattle.....	1.00	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45	1.45
Springfield, Ill.....	1.00	1.35	1.35	1.35	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Washington, D. C.....	.93	1.05	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

TABLE 2.—NET PRICE PER 1,000 CUBIC FEET OF GAS BASED ON A FAMILY CONSUMPTION OF 5,000 CUBIC FEET, IN SPECIFIED MONTHS FROM APRIL, 1913, TO DECEMBER, 1929, BY CITIES

Natural gas

City	Apr. 15, 1913	June 15, 1923	June 15, 1924	June 15, 1925	June 15, 1926	June 15, 1927	Dec. 15, 1927	June 15, 1928	Dec. 15, 1928	June 15, 1929	Dec. 15, 1929
Buffalo.....	\$0.30										
Cincinnati.....	.30	\$0.50	\$0.50	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75	\$0.75
Cleveland.....	.30	.55	.55	.55	.60	.60	.60	.60	.60	.60	.60
Columbus.....	.30	.45	.45	.55	.55	.48	.48	.48	.48	.48	.48
Dallas.....	.45	.68	.68	.74	.74	.79	.79	.79	.79	.79	.79
Denver.....									.99	.99	.99
Houston.....					.75	.75	.75	.75	.75	.65	.65
Kansas City.....	.27	.95	.95	.95	.95	.95	.95	.95	.95	.95	.95
Little Rock.....	.40	.45	.65	.65	.65	.65	.65	.65	.65	.65	.65
Los Angeles.....						.91	.91	.91	.84	.84	.84
Louisville.....		.45	.45	.45	.45	.45	.45	.45	.45	.45	.45
Memphis.....										.97	.95
New Orleans.....									.95	.95	.95
Pittsburgh.....	.28	.50	.53	.60	.60	.60	.60	.60	.60	.60	.60
Salt Lake City.....											.99

Manufactured and natural gas mixed

Buffalo.....		\$0.62	\$0.60	\$0.60	\$0.65	\$0.65	\$0.65	\$0.65	\$0.65	\$0.65	\$0.65
Los Angeles.....		.68	.68	.68	.68						

From the prices quoted on manufactured gas, average prices have been computed for all of the cities combined and are shown in the next table for specified months of each year from 1913 to 1929. These prices are based on an estimated average family consumption of 3,000 cubic feet.

Relative prices have been computed by dividing the price in each year by the price in April, 1913.

The price of manufactured gas in December, 1929, showed an increase of 27.4 per cent since April, 1913. From June, 1929, to December, 1929, there was a decrease of eight-tenths of 1 per cent in the price of gas.

TABLE 3.—AVERAGE AND RELATIVE NET PRICE PER 1,000 CUBIC FEET OF MANUFACTURED GAS IN UNITED STATES, BASED ON A FAMILY CONSUMPTION OF 3,000 CUBIC FEET IN SPECIFIED MONTHS OF EACH YEAR, 1913 TO 1929

Date	Average net price	Relative price	Date	Average net price	Relative price
Apr. 15, 1913.....	\$0.95	100.0	Sept. 15, 1923.....	\$1.24	130.5
Apr. 15, 1914.....	.94	98.9	Dec. 15, 1923.....	1.25	131.6
Apr. 15, 1915.....	.93	97.9	Mar. 15, 1924.....	1.24	130.5
Apr. 15, 1916.....	.92	96.8	June 15, 1924.....	1.24	130.5
Apr. 15, 1917.....	.91	95.8	Sept. 15, 1924.....	1.24	130.5
Apr. 15, 1918.....	.95	100.0	Dec. 15, 1924.....	1.24	130.5
Apr. 15, 1919.....	1.04	109.5	June 15, 1925.....	1.23	129.5
Apr. 15, 1920.....	1.09	114.7	Dec. 15, 1925.....	1.23	129.5
May 15, 1921.....	1.32	138.9	June 15, 1926.....	1.23	129.5
Sept. 15, 1921.....	1.31	137.9	Dec. 15, 1926.....	1.22	128.4
Dec. 15, 1921.....	1.30	136.8	June 15, 1927.....	1.22	128.4
Mar. 15, 1922.....	1.29	135.8	Dec. 15, 1927.....	1.22	128.4
June 15, 1922.....	1.27	133.7	June 15, 1928.....	1.21	127.4
Sept. 15, 1922.....	1.26	132.6	Dec. 15, 1928.....	1.22	128.4
Dec. 15, 1922.....	1.25	131.6	June 15, 1929.....	1.22	128.4
Mar. 15, 1923.....	1.25	131.6	Dec. 15, 1929.....	1.21	127.4
June 15, 1923.....	1.24	130.5			

Retail Prices of Electricity in the United States

Explanation of Prices

THE following table shows for 51 cities the net rates per kilowatt-hour of electricity used for household purposes for specified months in 1927, 1928, and 1929. For the cities having more than one tariff for domestic consumers the rates are shown for the schedule under which most of the residences are served.

Several cities have sliding scales based on a variable number of kilowatt-hours payable at each rate. The number of kilowatt-hours payable at each rate in these cities is determined for each customer according to the watts of installation, either in whole or in part, in the individual home. The number of watts so determined is called the customer's "demand."

In Baltimore the demand is the maximum normal rate of use of electricity in any half-hour period of time. It may be estimated or determined by the company from time to time according to the customer's normal use of electricity and may equal the total installation reduced to kilowatts.

In Buffalo the demand consists of two parts—lighting, 25 per cent of the total installation, but never less than 250 watts; and power, $2\frac{1}{2}$ per cent of the capacity of any electric range, water heater, or other appliance of 1,000 watts or over and 25 per cent of the rated capacity of motors exceeding one-half horsepower but less than 1 horsepower. The installation is determined by inspection of premises.

In Chicago the equivalent in kilowatt-hours to 30 hours' use of demand has been estimated as follows: For a rated capacity of 475 to 574 watts, 11 kilowatt-hours; 575 to 674 watts, 12 kilowatt-hours; 675 to 774 watts, 13 kilowatt-hours; and 775 to 874 watts, 14 kilowatt-hours. Although the equivalent in kilowatt-hours to 30 hours' use of demand of from 1 to 1,500 watts is given on the printed tariff, the equivalent is here shown only for installations of from 475 to 874 watts, the connected load of the average home being as a rule within this range.

In Cincinnati the demand has been estimated as being 70 per cent of the connected load, excluding appliances.

In Houston the demand is estimated as 50 per cent of the connected load, each socket opening being rated at 50 watts.

In New York the demand for Company C, when not determined by meter, has been computed at 50 per cent of total installation in residences, each standard socket being rated at 50 watts and all other outlets being rated at their actual kilowatt capacity.

In Pittsburgh the demand has been determined by inspection, the first 10 outlets being rated at 30 watts each, the next 20 outlets at 20 watts each, and each additional outlet at 10 watts. Household utensils and appliances of not over 660 watts each have been excluded.

In Portland, Oreg., the demand for Company A has been estimated as one-third of the connected lighting load. Ranges, heating devices, and small power up to a rated capacity of 2 kilowatts are not included.

In Washington, D. C., the demand is determined by inspection and consists of 100 per cent of the connected load, excluding small fans and heating and cooking appliances when not permanently connected.

NET PRICE PER KILOWATT-HOUR FOR ELECTRICITY FOR HOUSEHOLD USE IN SPECIFIED MONTHS OF 1927, 1928, AND 1929 FOR 51 CITIES

City	Measure of consumption, per month	De- cem- ber, 1927	June, 1928	De- cem- ber, 1928	June, 1929	De- cem- ber, 1929
		Cents	Cents	Cents	Cents	Cents
Atlanta	Service charge				100.0	100.0
	First 50 kilowatt-hours	¹ 8.1	¹ 8.1	¹ 8.1	5.0	5.0
	Next 150 kilowatt-hours				3.0	3.0
Baltimore	First 20 hours' use of demand ²	7.0	7.0	7.0	7.0	6.7
	Next kilowatt-hours equal to 8 times the consumption at the primary rate—minimum 200 kilowatt-hours.	² 4.0	² 4.0	² 4.0	² 4.0	3.4
Birmingham	First 5 kilowatt-hours for 3 rooms. Each additional room 10 cents extra up to 7 additional rooms.	¹ 7.7	¹ 7.7	¹ 7.7	80.0	80.0
	Next 45 kilowatt-hours				5.0	5.0
Boston	First 2 kilowatt-hours per 100 square feet of floor area.	⁴ 8.5	⁴ 8.5	8.5	8.5	8.5
	Next 70 kilowatt-hours			5.0	5.0	5.0
	Excess			3.0	3.0	3.0
Bridgeport	All current	6.0	6.0	5.5	5.5	5.5
Buffalo	First 60 hours' use of demand ²	5.0	5.0	5.0	5.0	5.0
	Next 120 hours' use of demand ²	4.0	4.0	4.0	4.0	4.0
	Excess	1.5	1.5	1.5	1.5	1.5
Butte	First 25 kilowatt-hours	8.0	8.0	8.0	8.0	8.0
	Next 25 kilowatt-hours	4.0	4.0	4.0	4.0	4.0
Charleston, S. C.	First 50 kilowatt-hours	10.0	10.0	10.0	10.0	10.0
Chicago	First 3 kilowatt-hours per room	⁸ 8.0	7.0	7.0	7.0	7.0
	Next 3 kilowatt-hours per room	⁶ 5.0	5.0	5.0	5.0	5.0
	Excess	3.0	3.0	3.0	3.0	3.0
Cincinnati	Service charge per room			10.0	10.0	10.0
	First 6 kilowatt-hours per room; minimum, 4 rooms.	⁷ 7.5	⁷ 7.5	5.0	5.0	5.0
	Next 60 kilowatt-hours	5.0	5.0			
	Excess	3.5	3.5	3.0	3.0	3.0
Cleveland:						
Company A	First 80 kilowatt-hours	⁸ 5.0	5.0	5.0	5.0	5.0
Company B	Service charge	30.0	30.0	30.0	30.0	30.0
	All current	3.0	3.0	3.0	3.0	3.0
Columbus	First 50 kilowatt-hours	⁹ 7.0	⁹ 7.0	⁹ 7.0	7.0	6.0
Dallas	All current	¹⁰ 6.0	6.0	6.0	6.0	6.0
Denver	First 15 kilowatt-hours	7.0	7.0	7.0	7.0	7.0
	Next 30 kilowatt-hours	6.0	6.0	6.0	6.0	6.0
	Excess	5.0	5.0	5.0	5.0	5.0
Detroit	First 3 kilowatt-hours per active room; minimum, 3 rooms.	9.0	9.0	9.0	9.0	9.0
	Next 50 kilowatt-hours			3.6	3.6	3.6
	Excess	3.6	3.6	2.3	2.3	2.3
Fall River	First 25 kilowatt-hours	8.5	8.0	8.0	8.0	8.0
	Next 75 kilowatt-hours	¹¹ 7.5	5.0	5.0	5.0	5.0
Houston	First 3 kilowatt-hours per room; minimum, 4 rooms.	⁵ 7.2	⁵ 7.2	⁵ 7.2	⁵ 7.2	7.0
	Next 100 kilowatt-hours	¹² 4.5	¹² 4.5	¹² 4.5	¹² 4.5	4.0
Indianapolis	First 50 kilowatt-hours	6.5	6.5	6.5	6.5	6.5
	Next 50 kilowatt-hours	6.0	6.0	6.0	6.0	6.0
Jacksonville	First 500 kilowatt-hours	¹³ 7.0	¹³ 7.0	¹³ 7.0	¹³ 7.0	7.0
Kansas City	First 5 kilowatt-hours per active room; minimum, 3 rooms.	7.0	7.0	7.0	7.0	6.5
	Next 5 kilowatt-hours per room	5.0	5.0	5.0	5.0	4.5
	Excess	2.5	2.5	2.5	2.5	2.5
Little Rock	First 200 kilowatt-hours	10.0	10.0	10.0	10.0	10.0
Los Angeles	First 50 kilowatt-hours	5.0	5.0	5.0	5.0	5.0
Louisville	First 30 kilowatt-hours	¹⁴ 7.6	¹⁴ 7.6	¹⁴ 7.6	¹⁴ 7.6	7.6
Manchester	First step: 3 rooms, 15 kilowatt-hours; 4 rooms, 18 kilowatt-hours; 5 rooms, 21 kilowatt-hours; 6 rooms, 24 kilowatt-hours; 7 rooms, 27 kilowatt-hours; 8 rooms, 30 kilowatt-hours.	¹⁵ 12.0	11.0	11.0	10.0	10.0
	Next step: Number of kilowatt-hours equal to the first step.	¹⁶ 6.0	7.0	7.0	7.0	7.0
Memphis	First 6 kilowatt-hours per room	8.0	8.0	8.0	8.0	8.0
	Excess	5.0	5.0	5.0	5.0	5.0
Milwaukee	First 9 kilowatt-hours for each of the first 6 active rooms and the first 7 kilowatt-hours for each active room in addition to the first 6.	6.7	6.7	6.7	6.7	6.7
	Next kilowatt-hours up to 300			2.9	2.9	2.9
	Excess	2.9	2.9	1.9	1.9	1.9
Minneapolis	First 3 kilowatt-hours per active room; minimum, 2 rooms.	9.5	9.5	8.6	8.6	8.6
	Next 3 kilowatt-hours per active room	7.1	7.1	7.1	7.1	7.1

For footnotes see end of table.

NET PRICE PER KILOWATT-HOUR FOR ELECTRICITY FOR HOUSEHOLD USE IN SPECIFIED MONTHS OF 1927, 1928, AND 1929 FOR 51 CITIES—Continued

City	Measure of consumption, per month	De- cem- ber, 1927	June, 1928	De- cem- ber, 1928	June, 1929	De- cem- ber, 1929
		Cents	Cents	Cents	Cents	Cents
Mobile.....	Service charge for house of 3 rooms—con- sumption of 5 kilowatt-hours included. 10 cents extra for each additional room; not more than 10 rooms counted.				80.0	80.0
	First 50 kilowatt-hours.....	9.0	9.0	9.0		
	Next 45 kilowatt-hours.....				5.0	5.0
Newark.....	First 20 kilowatt-hours.....	9.0	9.0	9.0	9.0	9.0
	Next 30 kilowatt-hours.....	8.0	8.0	8.0	8.0	8.0
New Haven.....	All current.....	6.0	6.0	5.5	5.5	5.5
New Orleans.....	Service charge.....	25.0	25.0	25.0	25.0	25.0
	First 20 kilowatt-hours.....	9.1	9.1	9.1	9.1	9.1
	Next 30 kilowatt-hours.....	7.8	7.8	7.8	7.8	7.8
New York:						
Company A.....	First 1,000 kilowatt-hours.....	7.3	7.3	7.0	7.0	7.0
Company B.....	All current.....	9.5	9.5	9.5	9.5	9.5
Company C.....	First 60 hours' use of demand ¹	7.3	7.3	7.0	7.0	7.0
Norfolk.....	First 100 kilowatt-hours.....	8.5	8.5	8.5	8.5	8.5
Omaha.....	First 10 kilowatt-hours per room.....	¹⁸ 5.5	¹⁸ 5.5	¹⁸ 5.5	5.5	5.5
	Next 160 kilowatt-hours.....				3.0	3.0
Peoria.....	First 4 kilowatt-hours per active room.....	¹⁷ 9.0	¹⁷ 9.0	¹⁷ 9.0	9.0	9.0
	Next 4 kilowatt-hours per active room.....	¹⁷ 6.0	¹⁷ 6.0	¹⁷ 6.0	6.0	6.0
	Excess.....				3.0	3.0
Philadelphia:						
Company A.....	First 12 kilowatt-hours.....	8.0	8.0	8.0	8.0	8.0
	Next 36 kilowatt-hours.....	7.0	7.0	7.0	6.0	6.0
Company B.....	First 20 kilowatt-hours.....	9.0	9.0	9.0	9.0	9.0
	Next 30 kilowatt-hours.....	8.0	8.0	8.0	8.0	8.0
Pittsburgh.....	First 10 kilowatt-hours.....	¹⁸ 8.0	8.0	8.0	8.0	8.0
	Next 20 kilowatt-hours.....	¹⁸ 5.5	5.5	5.5	5.5	5.5
Portland, Me.....	First 3 rooms, 15 kilowatt-hours; 4 rooms, 18 kilowatt-hours; 5 rooms, 21 kilowatt- hours; 6 rooms, 24 kilowatt-hours; 7 rooms, 27 kilowatt-hours; 8 rooms, 30 kilowatt-hours.	¹⁷ 8.0	¹⁷ 8.0	8.0	8.0	8.0
	Next 3 rooms, 35 kilowatt-hours; 4 rooms, 42 kilowatt-hours; 5 rooms, 49 kilowatt- hours; 6 rooms, 56 kilowatt-hours; 7 rooms, 63 kilowatt-hours; 8 rooms, 70 kilowatt-hours.	¹⁹ 5.0	¹⁹ 5.0	5.0	5.0	5.0
Portland, Oreg.:						
Company A.....	First 9 kilowatt-hours.....	7.6	7.6	7.6	7.6	7.6
	Next kilowatt-hours in excess of the first 9 kilowatt-hours until 100 use of demand has been reached. ³	6.7	6.7	6.7	6.7	6.7
	Next 50 kilowatt-hours.....	2.9	2.9	2.9	2.9	2.9
Company B.....	First 13 kilowatt-hours.....	7.3	7.3	7.3	7.3	7.3
	Next kilowatt-hours: For an installation of 600 watts or less 7 kilowatt-hours will apply. For each 30 watts of installation in excess of 600 watts 1 additional kilo- watt-hour will apply.	6.7	6.7	6.7	6.7	6.7
	Next 50 kilowatt-hours.....	2.9	2.9	2.9	2.9	2.9
Providence.....	Service charge.....	50.0	50.0	50.0	50.0	50.0
	All current.....	6.5	6.5	6.5	6.5	6.5
Richmond.....	First 100 kilowatt-hours.....	8.5	8.5	8.5	8.5	8.5
Rochester.....	All current.....	8.0	8.0	8.0	8.0	8.0
St. Louis:						
Company A.....	First 9 kilowatt-hours per active room.....	6.7	6.7	6.7	6.7	6.7
	Excess.....	2.4	2.4	2.4	2.4	2.4
Company B.....	First 4 rooms or less, 18 kilowatt-hours; 5 or 6 rooms, 27 kilowatt-hours; 7 or 8 rooms, 36 kilowatt-hours.	6.7	6.7	6.7	6.7	6.7
	Excess.....	2.4	2.4	2.4	2.4	2.4
St. Paul.....	First 3 kilowatt-hours per room.....	9.5	9.5	8.6	8.6	8.6
	Next 3 kilowatt-hours per room.....	7.1	7.1	7.1	7.1	7.1
	Excess.....	2.9	2.9	2.9	2.9	2.9
Salt Lake City.....	Service charge—consumption of 11 kilo- watt-hours included.				90.0	90.0
	First 250 kilowatt-hours.....	8.1	8.1	8.1		
	Excess.....				7.0	7.0
San Francisco:						
Company A.....	Service charge.....		40.0	40.0	40.0	40.0
	First 30 kilowatt-hours for residence of 6 rooms. 5 kilowatt-hours added for each additional room.	²⁰ 5.0	²¹ 5.0	²¹ 5.0	5.0	5.0
	Next 140 kilowatt-hours.....	²² 2.5	²² 4.0	²² 4.0	3.5	3.5

For footnotes see end of table.

NET PRICE PER KILOWATT-HOUR FOR ELECTRICITY FOR HOUSEHOLD USE IN SPECIFIED MONTHS OF 1927, 1928, AND 1929 FOR 51 CITIES—Continued

City	Measure of consumption, per month	De- cem- ber, 1927	June, 1928	De- cem- ber, 1928	June, 1929	De- cem- ber, 1929
San Francisco— Continued.		Cents	Cents	Cents	Cents	Cents
Company B.....	Service charge.....		40.0	40.0	40.0	40.0
	First 30 kilowatt-hours for residence of 6 rooms. 5 kilowatt-hours added for each additional room.	²⁴ 9.0	²¹ 5.0	²¹ 5.0	²¹ 5.0	5.0
	Next 140 kilowatt-hours.....	²² 6.0	²³ 4.0	²³ 4.0	²² 4.0	3.5
Savannah.....	Service charge.....					100.0
	First 50 kilowatt-hours.....	¹ 9.0	¹ 9.0	¹ 9.0	¹ 9.0	6.0
Scranton.....	First 150 kilowatt-hours.....	10.0	10.0	9.0	9.0	9.0
Seattle:						e
Company A.....	First 40 kilowatt-hours.....	5.5	5.5	5.5	5.5	5.5
	Next 200 kilowatt-hours.....	2.0	2.0	2.0	2.0	2.0
Company B.....	First 40 kilowatt-hours.....	5.5	5.5	5.5	5.5	5.5
	Next 200 kilowatt-hours.....	2.0	2.0	2.0	2.0	2.0
Springfield, Ill.:						
Company A.....	First 30 kilowatt-hours.....	6.0	6.0	6.0	6.0	6.0
	Next 70 kilowatt-hours.....	3.0	3.0	3.0	3.0	3.0
Company B.....	First 30 kilowatt-hours.....	6.0	6.0	6.0	6.0	6.0
	Next 70 kilowatt-hours.....	3.0	3.0	3.0	3.0	3.0
Washington, D. C.:	All current.....	¹⁸ 6.3	²⁶ 5.9	²⁶ 5.9	5.2	5.2

¹ First 100-kilowatt-hours.

² For determination of demand see explanation of prices.

³ Next kilowatt-hours up to 800.

⁴ First 1,000 kilowatt-hours.

⁵ First 30 hours' use of demand. For determination of demand see explanation of prices.

⁶ Next 30 hours' use of demand. For determination of demand see explanation of prices.

⁷ First 30 kilowatt-hours.

⁸ First 500 kilowatt-hours.

⁹ First 75 kilowatt-hours.

¹⁰ First 800 kilowatt-hours.

¹¹ Next 975 kilowatt-hours.

¹² Excess.

¹³ All current.

¹⁴ 1 to 149 kilowatt-hours.

¹⁵ First 25 kilowatt-hours.

¹⁶ Next 50 kilowatt-hours.

¹⁷ 5 kilowatt-hours for each of the first 2 active rooms and first 4 kilowatt-hours for each additional active room.

¹⁸ Next 60 hours' use of demand. For determination of demand see explanation of prices.

¹⁹ Next 70 kilowatt-hours.

²⁰ First 50 kilowatt-hours.

²¹ First 200 kilowatt-hours.

²² Next 125 kilowatt-hours.

²³ Next 800 kilowatt-hours.

²⁴ First 10 kilowatt-hours.

²⁵ Next 40 kilowatt-hours.

²⁶ First 120 hours' use of demand. For determination of demand see explanation of prices.

Index Numbers of Wholesale Prices for December and Year, 1929

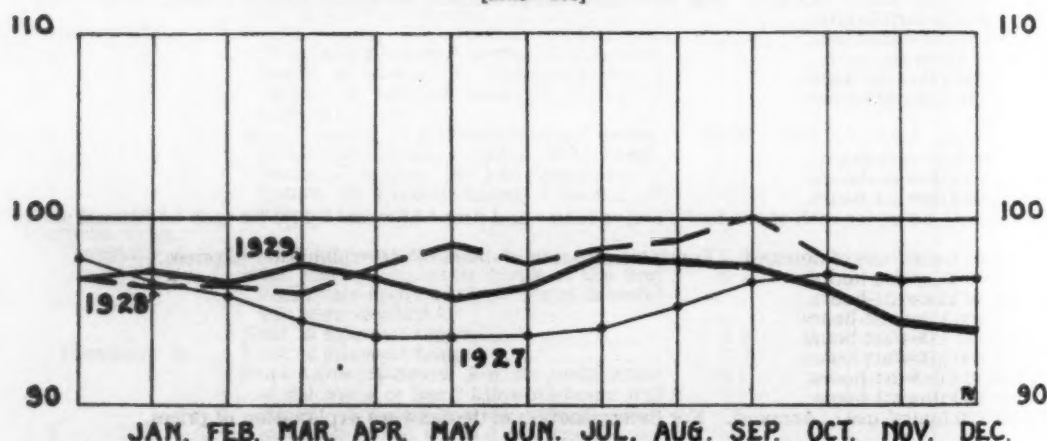
A MINOR decrease in the general level of wholesale prices from November to December is shown by information collected in leading markets by the Bureau of Labor Statistics of the United States Department of Labor. The bureau's weighted index number, with prices in 1926 as 100.0, stands at 94.2 for December compared with 94.4 for November, a decrease of one-fifth of 1 per cent. Compared with December, 1928, with an index number of 96.7, a decrease of over 2½ per cent is shown. Based on these figures, the purchasing power of the dollar in December was 106.2 compared with 100.0 in the year 1926. The price level for the year 1929 stands at 96.5 compared with 97.7 for 1928.

Farm products in December showed a slight advance over November prices, due mainly to increases for wheat, rye, calves, hogs, poultry, eggs, and onions. Beef steers, cotton, hay, lemons, oranges, and wool, on the other hand were cheaper than in November.

Foods showed little change in average prices, increases for rye and wheat flour, dressed poultry, and fresh meats being more than offset by decreases for butter, cheese, coffee, and certain cured meats. A small net decrease is shown for the group as a whole.

TREND OF WHOLESALE PRICES

[1926=100]



Hides and skins decreased somewhat from November prices, as did leather also. Boots and shoes and other leather goods showed no change in prices.

Prices of cotton goods, raw silk, and woollen and worsted goods, all averaged lower than in the preceding month.

Anthracite coal was stationary in price, while bituminous coal advanced and coke declined slightly. Prices of petroleum products were downward.

In the group of metals and metal products there were slight price declines in steel billets, steel scrap, concrete reinforcing bars, and roofing tin, also in pig lead, pig tin, lead pipe, bar silver, and slab zinc. Agricultural implements and automobiles showed no change in price.

Chemicals as a whole, including fertilizer materials and prepared fertilizers, showed a minor price decline.

Household furniture was stationary in price in the month, while house furnishings advanced slightly.

In the group of miscellaneous commodities there were declines in cattle feed, paper and pulp, and crude rubber. Automobile tires showed a slight upward tendency.

Raw materials, considered as a whole, averaged somewhat higher than in November, while semimanufactured articles and finished products were lower. Nonagricultural commodities, also, as a group, declined in price.

Of the 550 commodities or price series for which comparable information for November and December was collected, increases were shown in 86 instances and decreases in 162 instances. In 302 instances no change in price was reported.

Comparing prices in December with those of a year ago, as measured by changes in the index numbers, it is seen that hides and leather products, textile products, fuel and lighting materials, and chemicals and drugs were appreciably lower, while farm products, metals and metal products, building materials, and articles in the group of miscellaneous commodities, were somewhat lower. Minor price increases are shown for foods and house-furnishing goods.

INDEX NUMBERS OF WHOLESALE PRICES BY GROUPS AND SUBGROUPS OF COMMODITIES [1926=100.0]

Groups and subgroups	December, 1928	November, 1929	December, 1929	Year, 1929	Purchasing power of the dollar December, 1929
All commodities.....	96.7	94.4	94.2	96.5	106.2
Farm products.....	103.6	101.1	101.9	104.9	98.1
Grains.....	94.3	94.9	97.5	97.4	102.6
Livestock and poultry.....	99.1	93.7	94.6	106.1	105.7
Other farm products.....	110.0	108.1	108.2	106.6	92.4
Foods.....	98.0	98.8	98.6	99.7	101.4
Butter, cheese, and milk.....	110.0	103.7	101.9	105.8	98.1
Meats.....	102.3	102.5	103.2	109.1	96.9
Other foods.....	90.8	94.5	94.4	91.6	105.9
Hides and leather products.....	115.7	108.4	107.4	109.2	93.1
Hides and skins.....	131.0	109.3	107.4	112.7	93.1
Leather.....	119.3	113.3	110.6	113.2	90.4
Boots and shoes.....	108.4	106.1	106.1	106.3	94.3
Other leather products.....	108.4	106.1	106.1	106.2	94.3
Textile products.....	96.1	91.5	90.4	93.7	110.6
Cotton goods.....	101.3	98.1	97.2	99.4	102.9
Silk and rayon.....	83.7	77.0	75.4	80.1	132.6
Woolen and worsted goods.....	100.0	95.7	94.6	97.8	105.7
Other textile products.....	84.9	76.1	75.1	81.8	133.2
Fuel and lighting materials.....	83.5	81.7	81.3	81.6	123.0
Anthracite coal.....	91.2	91.2	91.2	90.1	109.6
Bituminous coal.....	93.2	92.0	92.4	91.3	108.2
Coke.....	84.5	84.4	84.2	84.6	118.8
Manufactured gas.....	93.3	92.4	(1)	(1)	---
Petroleum products.....	73.9	70.9	69.9	71.3	143.1
Metals and metal products.....	102.9	102.3	102.1	104.4	97.9
Iron and steel.....	96.6	96.5	96.3	97.3	103.8
Nonferrous metals.....	98.0	102.4	101.5	105.7	98.5
Agricultural implements.....	98.8	96.1	96.1	97.9	104.1
Automobiles.....	111.2	108.0	108.0	110.9	92.6
Other metal products.....	96.9	98.6	98.6	98.5	101.4
Building materials.....	96.8	96.0	96.2	97.1	104.0
Lumber.....	93.6	92.4	92.4	94.5	108.2
Brick.....	93.6	90.5	90.5	91.1	110.5
Cement.....	94.6	86.6	89.2	91.8	112.1
Structural steel.....	97.0	97.0	97.0	98.1	103.1
Paint materials.....	87.7	97.8	95.7	91.3	104.5
Other building materials.....	107.0	105.4	106.5	106.9	93.9
Chemicals and drugs.....	96.1	94.0	93.6	94.4	106.8
Chemicals.....	102.4	100.0	99.6	100.2	100.4
Drugs and pharmaceuticals.....	70.8	70.6	70.6	70.5	141.6
Fertilizer materials.....	94.1	89.9	89.5	92.1	111.7
Fertilizers.....	97.8	97.4	97.1	97.2	103.0
House-furnishing goods.....	96.4	97.1	97.3	96.9	102.8
Furniture.....	95.3	96.7	96.7	96.0	103.4
Furnishings.....	97.1	97.4	97.7	97.5	102.4
Miscellaneous.....	80.1	80.1	79.8	80.5	125.3
Cattle feed.....	137.0	124.1	122.4	121.6	81.7
Paper and pulp.....	88.6	87.9	87.3	87.9	114.5
Rubber.....	37.0	34.5	33.2	42.3	301.2
Automobile tires.....	58.1	55.0	55.2	55.6	181.2
Other miscellaneous.....	99.7	108.6	108.9	106.3	91.8
Raw materials.....	97.4	94.8	95.0	97.5	105.3
Semimanufactured articles.....	97.2	95.6	94.3	96.5	106.0
Finished products.....	96.4	94.2	93.9	96.2	106.5
Nonagricultural commodities.....	94.8	92.6	92.1	94.4	108.6

¹ Data not yet available.

COST OF LIVING

Changes in the Cost of Living in the United States

ACCORDING to a semiannual survey just completed by the United States Bureau of Labor Statistics, the cost of living in the United States increased 0.7 per cent in the 6-month period from June, 1929, to December, 1929, and increased 0.1 per cent between December, 1928, and December, 1929. These figures are compiled from information secured from merchants and dealers in 32 cities. For 19 of these cities the studies began in December, 1914, and for the other 13 cities in December, 1917. A combined index number is computed from the figures for the 32 cities, which is believed to be fairly representative for the United States. The index number for the United States is based on the year 1913, since that year is the basis for many of the bureau's index numbers. In order to use the year 1913 as a base it was necessary to determine as nearly as possible the increase from 1913 to December, 1914. This was done by using retail prices of food and wholesale prices of other articles already secured by the bureau.

Table 1 presents the index numbers for changes in the cost of living in the United States for all periods for which surveys have been made by the bureau. The index number for December, 1929, is 171.4, indicating that the cost of living for that month was 71.4 per cent higher than the average for 1913. It will be noted that June, 1920, represents the peak of cost of living prices, the index being 216.5. In December, 1925, the cost of living index was 177.9. Recently, however, there have been only slight variations in the index numbers.

TABLE 1.—INDEX NUMBERS SHOWING CHANGES IN COST OF LIVING IN THE UNITED STATES, 1913 TO DECEMBER, 1929

Date	Index numbers	Date	Index numbers	Date	Index numbers
Average, 1913.....	100.0	December, 1921.....	174.3	December, 1924.....	172.5
December, 1914.....	103.0	March, 1922.....	166.9	June, 1925.....	173.5
December, 1915.....	105.1	June, 1922.....	166.4	December, 1925.....	177.9
December, 1916.....	118.3	September, 1922.....	166.3	June, 1926.....	174.8
December, 1917.....	142.4	December, 1922.....	169.5	December, 1926.....	175.6
December, 1918.....	174.4	March, 1923.....	168.8	June, 1927.....	173.4
June, 1919.....	177.3	June, 1923.....	169.7	December, 1927.....	172.0
December, 1919.....	199.3	September, 1923.....	172.1	June, 1928.....	170.0
June, 1920.....	216.5	December, 1923.....	173.2	December, 1928.....	171.3
December, 1920.....	200.4	March, 1924.....	170.4	June, 1929.....	170.2
May, 1921.....	180.4	June, 1924.....	169.1	December, 1929.....	171.4
September, 1921.....	177.3	September, 1924.....	170.6		

Table 2 shows index numbers relating to changes in the cost of living in the United States for each of the six groups of items entering into the total cost, for all the periods for which surveys were made by the bureau.

Comparing the December, 1929, figures with those for 1913, rent shows the least increase, being 51.9 per cent higher than in 1913, and food shows the next lowest increase, being 58.0 per cent higher than in 1913.

TABLE 2.—INDEX NUMBERS SHOWING CHANGES IN COST OF GROUPS OF ITEMS ENTERING INTO COST OF LIVING IN THE UNITED STATES, 1913 TO DECEMBER, 1929

Date	Index numbers						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
Average, 1913.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
December, 1914.....	105.0	101.0	(1)	101.0	104.0	103.0	103.0
December, 1915.....	105.0	104.7	101.5	101.0	110.6	107.4	105.1
December, 1916.....	126.0	120.0	102.3	108.4	127.8	113.3	118.3
December, 1917.....	157.0	149.1	100.1	124.1	150.6	140.5	142.4
December, 1918.....	187.0	205.3	109.2	147.9	213.6	165.8	174.4
June, 1919.....	184.0	214.5	114.2	145.6	225.1	173.2	177.3
December, 1919.....	197.0	208.7	125.3	156.8	263.5	190.2	199.3
June, 1920.....	219.0	287.5	134.9	171.9	292.7	201.4	216.5
December, 1920.....	178.0	258.5	151.1	194.9	285.4	208.2	200.4
May, 1921.....	144.7	222.6	159.0	181.6	247.7	208.8	200.4
September, 1921.....	153.1	192.1	160.0	180.9	224.7	207.8	177.3
December, 1921.....	149.9	184.4	161.4	181.1	218.0	206.8	174.3
March, 1922.....	138.7	175.5	160.9	175.8	206.2	203.3	166.9
June, 1922.....	140.7	172.3	160.9	174.2	202.9	201.5	166.4
September, 1922.....	139.7	171.3	161.1	183.6	202.9	201.1	166.3
December, 1922.....	146.6	171.5	161.9	186.4	208.2	200.5	169.5
March, 1923.....	141.9	174.4	162.4	186.2	217.6	200.3	168.8
June, 1923.....	144.3	174.9	163.4	180.6	222.2	200.3	169.7
September, 1923.....	149.3	176.5	164.4	181.3	222.4	201.1	172.1
December, 1923.....	150.3	176.3	166.5	184.0	222.4	201.7	173.2
March, 1924.....	143.7	175.8	167.0	182.2	221.3	201.1	170.4
June, 1924.....	142.4	174.2	168.0	177.3	216.0	201.1	169.1
September, 1924.....	146.8	172.3	168.0	179.1	214.9	201.1	170.6
December, 1924.....	151.5	171.3	168.2	180.5	216.0	201.7	172.5
June, 1925.....	155.0	170.6	167.4	176.5	214.3	202.7	173.5
December, 1925.....	165.5	169.4	167.1	186.9	214.3	203.5	177.9
June, 1926.....	159.7	168.2	165.4	180.7	210.4	203.3	174.8
December, 1926.....	161.8	166.7	164.2	188.3	207.7	203.9	175.6
June, 1927.....	158.5	164.9	162.1	180.8	205.2	204.5	173.4
December, 1927.....	155.9	162.9	160.2	183.2	204.6	205.1	172.0
June, 1928.....	152.6	162.6	157.6	177.2	201.1	205.5	170.0
December, 1928.....	155.8	161.9	155.9	181.3	199.7	207.1	171.3
June, 1929.....	154.8	161.3	153.7	175.2	198.5	207.3	170.2
December, 1929.....	158.0	160.5	151.9	178.7	197.7	207.9	171.4

¹ No change.

Table 3 shows the per cent of decrease in the price of electricity as compared with December, 1913. It will be noted that this commodity has continually been lower than in 1913, the December, 1929, figure showing a decrease of 17.3 per cent since 1913.

TABLE 3.—PER CENT OF DECREASE IN THE PRICE OF ELECTRICITY AT SPECIFIED PERIODS AS COMPARED WITH DECEMBER, 1913

Date	Per cent of decrease from December, 1913	Date	Per cent of decrease from December, 1913	Date	Per cent of decrease from December, 1913
December, 1914.....	3.7	March, 1922.....	4.9	June, 1925.....	9.9
December, 1915.....	6.2	June, 1922.....	6.2	December, 1925.....	9.9
December, 1916.....	8.6	September, 1922.....	6.2	June, 1926.....	11.1
December, 1917.....	11.1	December, 1922.....	7.4	December, 1926.....	11.1
December, 1918.....	6.2	March, 1923.....	7.4	June, 1927.....	12.3
June, 1919.....	6.2	June, 1923.....	7.4	December, 1927.....	12.3
December, 1919.....	7.4	September, 1923.....	8.6	June, 1928.....	13.6
June, 1920.....	7.4	December, 1923.....	8.6	December, 1928.....	14.8
December, 1920.....	4.9	March, 1924.....	8.6	June, 1929.....	17.3
May, 1921.....	4.9	June, 1924.....	8.6	December, 1929.....	17.3
September, 1921.....	4.9	September, 1924.....	8.6		
December, 1921.....	4.9	December, 1924.....	8.6		

Table 4 shows changes in the cost of living in each of the 32 cities between June, 1920, and December, 1929; between December, 1928, and December, 1929; and between June, 1929, and December, 1929. Each of the 32 cities showed decreases from June, 1920, to December, 1929, ranging from 16.0 to 26.0 per cent. Comparing December, 1929, with December, 1928, 14 of the 32 cities showed increases ranging from 0.1 to 1.6 per cent and 18 cities showed a decrease ranging from 0.2 to 2.1 per cent. In the 6-month period from June, 1929, to December, 1929, 8 cities had a decrease and 22 cities an increase, while no change was reported in 2 cities.

TABLE 4.—PER CENT OF CHANGE IN COST OF LIVING IN SPECIFIED CITIES FROM JUNE, 1920, DECEMBER, 1928, AND JUNE, 1929, TO DECEMBER, 1929

City	Per cent of decrease from June, 1920, to December, 1929	Per cent of increase (+) or decrease (-) from—		City	Per cent of decrease from June, 1920, to December, 1929	Per cent of increase (+) or decrease (-) from—	
		December, 1928, to December, 1929	June, 1929, to December, 1929			December, 1928, to December, 1929	June, 1929, to December, 1929
Atlanta.....	22.6	-1.8	-0.1	New Orleans.....	16.3	-0.6	+0.8
Baltimore.....	18.3	+ .7	+ .7	New York.....	19.2	+ .5	+ .9
Birmingham.....	21.2	-2.1	- .4	Norfolk.....	21.9	- .3	+ .7
Boston.....	20.1	+ .1	+1.8	Philadelphia.....	18.0	+ .3	+1.1
Buffalo.....	18.7	+ .2	+ .7	Pittsburgh.....	17.4	-1.0	(¹)
Chicago.....	19.1	+ .3	+ .8	Portland, Me.....	20.1	- .5	+ .6
Cincinnati.....	16.3	+1.6	+1.1	Portland, Oreg.....	24.4	- .5	+ .6
Cleveland.....	20.9	- .6	- .8	Richmond.....	20.1	- .7	+ .6
Denver.....	22.8	- .2	+ .4	St. Louis.....	18.3	+1.1	+1.0
Detroit.....	24.7	+ .2	- .2	San Francisco.....	18.0	- .6	+ .4
Houston.....	20.8	+1.0	+1.1	Savannah.....	24.9	-1.2	(¹)
Indianapolis.....	20.9	+ .3	+ .9	Scranton.....	16.0	- .4	+ .8
Jacksonville.....	23.4	-2.0	- .7	Seattle.....	19.9	+1.0	+ .6
Kansas City.....	26.0	+ .4	+ .6	Washington.....	20.9	- .6	- .5
Los Angeles.....	16.4	-1.3	- .1				
Memphis.....	20.4	- .9	- .3	Average, United States.....	20.8	+ .1	+ .7
Minneapolis.....	19.0	+ .9	+ .7				
Mobile.....	20.4	- .5	+ .5				

¹ No change.

Table 5 shows for 19 cities changes in the cost of living for each of the six groups of items entering into the total cost, from December, 1914, to December, 1929. Table 6 gives similar information for the 13 cities for which all price data were first obtained in December, 1917. The figures in these tables are presented in percentage form rather than by index numbers.

The prices of food are obtained monthly by mail from 15 to 25 grocers, meat dealers, bakers, and dairymen who regularly report their prices in the several cost-of-living cities.

Fuel and light prices are also obtained from regular correspondents. The public utilities furnish gas and electric figures, while prices on coal and wood are reported by 10 to 15 firms in each city.

All other price data are secured by personal visits of representatives of the bureau. Four quotations are procured in each city (5 in New York) on each of a large number of articles of clothing, house furnishing goods, and miscellaneous items. The male clothing schedule includes articles for a man and a 12-year-old boy. Prices are taken on suits and overcoats, hats and caps, shoes, rubbers, repair of shoes, underwear, and furnishings. The female clothing schedule includes articles for a woman and a 6-year-old girl. Prices cover coats and

dresses, shoes, rubbers, repair of shoes, kimonos, bath robes, hosiery, and underclothing. Quotations are also taken on silk, wool, and cotton yard goods which are used in making dresses and aprons for the woman and child.

The household furnishings on which prices are obtained cover living room, dining room, and bedroom furniture, rugs and linoleum, household linens and bedding, baby carriages, sewing machines, stoves, brooms, refrigerators, and kitchen tables. The miscellaneous items include street car fares, moving pictures, newspapers, physicians' fees, hospital fees for wards, dentists' fees, spectacles, laundry, cleaning supplies, barber service, toilet articles and preparations, telephone rates for home service, and tobacco prices. Real estate agencies furnish rentals on from 500 to 2,300 unfurnished houses and apartments in each city, according to its population. The average price of each item is weighted according to its importance in the average family budget.

TABLE 5.—CHANGES IN COST OF LIVING IN 19 CITIES, DECEMBER, 1914, TO DECEMBER, 1929

City and date	Per cent of increase over December, 1914, in expenditure for —						
	Food	Clothing	Rent	Fuel and light	House-furnish-ing goods	Miscel-laneous	All items
Baltimore, Md.:							
December, 1915.....	14.1	2.7	10.2	0.5	5.6	11.4	11.4
December, 1916.....	20.9	24.0	.9	9.1	26.4	18.5	18.5
December, 1917.....	64.4	52.1	3.0	25.5	60.8	51.3	51.3
December, 1918.....	96.4	107.7	13.8	46.0	122.3	78.7	84.7
June, 1919.....	91.1	128.9	16.8	37.1	134.6	82.8	84.0
December, 1919.....	92.5	177.4	25.8	48.1	167.0	99.4	98.4
June, 1920.....	110.9	191.3	41.6	57.6	191.8	111.4	114.3
December, 1920.....	75.6	159.5	49.5	79.0	181.9	112.9	96.8
May, 1921.....	43.4	123.2	63.0	70.9	147.5	111.8	77.4
December, 1921.....	46.9	88.6	64.7	85.5	123.7	108.6	73.2
June, 1922.....	39.9	78.9	65.4	84.8	113.3	104.4	67.6
December, 1922.....	46.1	80.5	66.9	94.9	116.6	102.6	70.9
June, 1923.....	46.5	81.4	69.6	91.6	127.5	103.8	72.0
December, 1923.....	50.6	81.8	71.9	93.5	130.2	105.2	74.8
June, 1924.....	44.0	78.3	72.4	84.8	129.4	100.9	71.9
December, 1924.....	53.0	76.2	72.2	88.7	125.7	107.1	74.8
June, 1925.....	57.7	76.0	72.0	85.3	122.8	111.0	77.3
December, 1925.....	66.2	76.2	72.2	90.9	122.1	111.6	81.2
June, 1926.....	62.2	73.0	71.3	89.8	112.8	111.2	78.4
December, 1926.....	63.0	72.5	70.6	87.3	110.5	112.3	78.6
June, 1927.....	56.7	71.3	69.9	82.2	106.9	112.9	75.3
December, 1927.....	56.7	68.4	68.0	85.5	104.8	112.3	74.5
June, 1928.....	52.9	68.1	66.7	82.0	103.2	118.7	73.7
December, 1928.....	51.9	68.3	65.7	87.3	102.0	120.9	73.9
June, 1929.....	53.8	67.5	65.2	80.7	100.4	119.8	73.8
December, 1929.....	56.7	67.2	63.4	86.1	99.4	120.2	75.1
Boston, Mass.:							
December, 1915.....	1.3	6.6	1.1	1.1	8.4	1.6	1.6
December, 1916.....	18.0	21.9	.1	10.5	26.3	15.7	15.7
December, 1917.....	45.8	47.5	1.1	29.2	58.4	38.1	38.1
December, 1918.....	74.9	117.5	2.8	56.6	137.6	62.0	70.6
June, 1919.....	67.9	137.9	5.1	55.0	153.7	64.8	72.8
December, 1919.....	80.8	192.4	12.2	63.2	198.7	81.1	92.3
June, 1920.....	105.0	211.1	16.2	83.6	233.7	91.8	110.7
December, 1920.....	74.4	192.7	25.8	106.0	226.4	96.6	97.4
May, 1921.....	41.9	150.3	29.8	97.8	171.2	96.2	74.4
December, 1921.....	50.4	106.3	33.8	98.5	136.9	93.0	70.2
June, 1922.....	32.5	96.7	34.4	92.5	124.2	89.5	59.6
December, 1922.....	44.9	92.0	36.7	99.9	133.6	87.8	65.1
June, 1923.....	39.7	93.0	40.2	88.8	150.5	89.2	63.5
December, 1923.....	48.8	92.6	47.0	97.0	148.2	93.0	69.4
June, 1924.....	37.9	91.2	50.7	90.7	136.9	88.0	63.2
December, 1924.....	47.8	89.1	52.4	93.7	138.1	85.9	67.3
June, 1925.....	44.5	88.9	52.9	90.4	136.9	86.3	65.8
December, 1925.....	60.6	87.8	54.0	107.2	136.7	91.0	74.7
June, 1926.....	51.5	85.9	53.2	94.4	133.1	91.0	69.4

¹ Decrease.

TABLE 5.—CHANGES IN COST OF LIVING IN 19 CITIES, DECEMBER, 1914, TO DECEMBER, 1929—Continued

City and date	Per cent of increase over December, 1914, in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
Boston, Mass.—Continued.							
December, 1926.....	56.6	85.3	53.5	98.7	129.6	92.3	71.9
June, 1927.....	50.5	82.9	53.2	92.5	125.5	91.5	68.1
December, 1927.....	54.4	80.2	52.4	96.5	124.4	91.3	69.5
June, 1928.....	45.0	80.2	52.2	90.4	123.1	90.2	64.8
December, 1928.....	50.5	80.4	51.6	96.7	118.4	94.4	68.2
June, 1929.....	47.1	79.0	50.7	87.7	118.4	92.1	65.4
December, 1929.....	53.2	79.0	49.2	94.3	118.0	92.9	68.4
Buffalo, N. Y.:							
December, 1915.....	2.4	9.0	1.2	1.3	7.1	3.5	3.5
December, 1916.....	30.1	29.6	4.7	9.3	24.1	24.4	24.4
December, 1917.....	64.1	58.5	9.4	23.5	50.2	51.1	51.1
December, 1918.....	87.8	123.1	20.7	49.3	106.3	76.0	80.9
June, 1919.....	82.9	140.7	28.0	51.9	118.1	78.7	84.2
December, 1919.....	94.7	190.8	29.0	55.7	165.4	90.3	102.7
June, 1920.....	115.7	210.6	46.6	69.8	199.7	101.9	121.5
December, 1920.....	78.5	168.7	48.5	74.9	189.2	107.4	101.7
May, 1921.....	37.7	131.6	61.1	73.9	151.3	107.8	80.3
December, 1921.....	50.8	96.5	61.7	79.7	124.7	103.0	76.8
June, 1922.....	38.5	83.6	64.7	78.8	108.0	97.9	68.6
December, 1922.....	48.8	81.4	64.9	115.7	112.8	97.5	73.9
June, 1923.....	41.6	83.4	70.0	119.1	127.9	100.5	74.1
December, 1923.....	51.9	83.8	71.8	120.4	127.5	102.5	78.6
June, 1924.....	39.5	81.7	76.3	116.6	121.0	101.9	73.9
December, 1924.....	51.6	79.9	76.8	117.9	121.0	100.9	77.8
June, 1925.....	52.0	80.3	79.1	115.5	119.5	107.7	79.7
December, 1925.....	66.5	79.8	79.5	117.9	118.2	107.9	84.8
June, 1926.....	60.9	76.7	78.1	127.3	113.6	110.6	82.8
December, 1926.....	63.6	74.6	77.4	127.1	110.2	112.5	83.6
June, 1927.....	56.7	72.2	75.8	126.9	106.2	111.4	79.8
December, 1927.....	55.9	71.2	73.7	128.5	106.0	116.3	80.2
June, 1928.....	51.6	71.7	72.7	126.7	105.4	117.8	78.7
December, 1928.....	54.9	72.4	69.4	128.5	104.2	117.8	79.6
June, 1929.....	54.6	71.2	67.0	123.2	104.4	118.9	78.8
December, 1929.....	57.9	71.0	66.5	127.0	104.2	119.1	80.0
Chicago, Ill.:							
December, 1915.....	2.7	7.5	1.1	1.9	5.9	3.0	3.0
December, 1916.....	25.2	24.2	.7	6.6	20.0	19.5	19.5
December, 1917.....	53.4	50.6	1.4	19.3	47.5	41.8	41.8
December, 1918.....	78.7	138.9	2.6	37.1	108.9	58.7	72.2
June, 1919.....	73.3	157.1	8.0	35.7	126.9	61.7	74.5
December, 1919.....	93.1	224.0	14.0	40.1	176.0	84.3	100.6
June, 1920.....	120.0	205.3	35.1	62.4	215.9	87.5	114.6
December, 1920.....	70.5	158.6	48.9	83.5	205.8	96.5	93.3
May, 1921.....	41.9	122.7	78.2	65.3	162.4	98.5	78.4
December, 1921.....	48.3	74.3	83.9	69.4	133.7	94.5	72.3
June, 1922.....	41.6	63.0	87.4	55.4	108.5	87.9	65.0
December, 1922.....	44.8	67.5	88.9	65.6	120.4	86.7	68.0
June, 1923.....	45.1	72.2	92.1	54.9	133.1	87.7	69.6
December, 1923.....	52.5	76.0	95.4	59.3	132.9	88.1	73.7
June, 1924.....	47.9	72.6	104.4	53.0	122.2	90.7	72.6
December, 1924.....	56.2	67.8	105.8	56.1	121.9	90.7	75.3
June, 1925.....	61.4	65.8	105.6	53.9	118.1	93.9	77.1
December, 1925.....	69.4	65.3	104.4	65.8	118.5	93.9	80.6
June, 1926.....	67.2	62.7	99.5	55.4	112.4	94.3	77.8
December, 1926.....	69.6	61.9	96.7	64.4	109.2	95.7	79.0
June, 1927.....	68.2	58.7	93.9	57.2	105.2	96.7	77.1
December, 1927.....	62.4	53.8	90.0	59.2	104.4	99.7	74.3
June, 1928.....	59.4	53.3	86.8	51.2	96.0	98.5	71.5
December, 1928.....	62.4	52.1	83.6	56.5	97.2	101.7	73.1
June, 1929.....	63.0	51.5	80.3	50.7	97.4	101.7	72.3
December, 1929.....	67.3	49.2	77.2	56.7	97.0	102.9	73.7
Cleveland, Ohio:							
December, 1915.....	1.4	2.0	.1	.3	4.7	1.4	1.4
December, 1916.....	26.4	18.0	.9	10.0	19.7	19.1	19.1
December, 1917.....	54.3	43.7	11.3	26.8	47.8	42.9	42.9
December, 1918.....	79.4	102.6	16.5	51.9	102.4	67.1	71.4
June, 1919.....	79.7	125.2	21.8	47.9	117.0	74.7	77.2
December, 1919.....	92.9	171.2	39.9	62.9	165.5	85.9	98.2
June, 1920.....	118.7	185.1	47.3	90.3	186.5	117.9	120.3
December, 1920.....	71.7	156.0	80.0	94.5	176.8	134.0	107.3
May, 1921.....	37.4	124.0	88.1	89.6	133.6	129.6	87.5
December, 1921.....	40.9	85.8	81.2	103.8	100.8	123.2	78.8
June, 1922.....	34.6	72.4	69.6	102.2	87.8	110.7	68.9
December, 1922.....	41.1	70.9	74.0	116.3	104.8	109.4	72.9

1 Decrease.

TABLE 5.—CHANGES IN COST OF LIVING IN 19 CITIES, DECEMBER, 1914, TO DECEMBER, 1929—Continued

City and date	Per cent of increase over December, 1914, in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
Cleveland, Ohio—Continued.							
June, 1923.....	42.1	77.6	73.8	151.6	129.6	108.1	77.1
December, 1923.....	43.6	79.6	78.7	147.0	129.3	113.1	79.6
June, 1924.....	37.2	78.4	77.7	142.6	118.0	112.7	75.9
December, 1924.....	46.2	72.9	78.6	144.1	113.4	112.1	78.1
June, 1925.....	53.8	71.9	76.8	143.9	111.9	112.3	80.4
December, 1925.....	58.3	71.9	75.6	168.8	113.4	111.5	82.7
June, 1926.....	60.0	70.7	71.6	162.3	106.1	111.9	81.9
December, 1926.....	58.7	68.3	71.8	170.7	105.3	112.7	81.5
June, 1927.....	56.6	67.5	67.5	163.9	103.2	115.9	80.2
December, 1927.....	55.1	66.0	66.3	164.2	97.9	115.9	79.0
June, 1928.....	50.6	65.7	61.8	161.3	90.2	118.1	76.3
December, 1928.....	48.5	63.9	60.5	163.7	89.2	119.0	75.4
June, 1929.....	50.6	63.9	59.5	160.5	89.4	117.9	75.7
December, 1929.....	47.0	63.2	58.9	163.1	88.8	118.3	74.3
Detroit, Mich.:							
December, 1915.....	4.1	2.3	2.1	1.6	8.7	3.5	3.5
December, 1916.....	26.5	18.9	17.5	9.9	24.5	22.3	22.3
December, 1917.....	59.7	46.7	32.6	30.2	50.4	49.9	49.9
December, 1918.....	82.5	113.8	39.0	47.6	107.3	72.6	78.0
June, 1919.....	86.4	125.2	45.2	47.6	129.3	80.3	84.4
December, 1919.....	99.5	181.8	60.2	57.9	172.6	100.1	107.9
June, 1920.....	132.0	208.8	68.8	74.9	206.7	141.3	136.0
December, 1920.....	75.6	176.1	108.1	104.5	184.0	144.0	118.6
May, 1921.....	41.1	134.1	101.4	83.6	134.0	140.1	93.3
December, 1921.....	47.3	92.5	91.1	77.5	96.8	130.7	82.4
June, 1922.....	43.1	81.4	86.9	75.2	76.0	121.3	75.3
December, 1922.....	44.8	79.9	92.1	95.5	81.1	121.5	78.2
June, 1923.....	46.7	84.0	96.9	87.3	105.7	124.2	81.7
December, 1923.....	47.5	85.3	107.5	84.9	105.3	128.4	84.7
June, 1924.....	45.5	82.3	105.6	81.8	103.4	127.2	82.8
December, 1924.....	49.7	76.1	103.8	82.7	98.1	125.4	82.2
June, 1925.....	60.6	75.2	98.7	78.9	94.1	124.7	84.5
December, 1925.....	68.1	74.8	97.7	101.1	93.7	122.5	87.8
June, 1926.....	65.7	73.4	95.5	76.4	91.8	122.5	84.7
December, 1926.....	63.8	71.0	95.5	86.8	88.7	121.6	84.1
June, 1927.....	65.2	68.3	89.6	73.4	86.8	125.1	82.7
December, 1927.....	57.6	64.1	84.1	76.9	84.7	128.3	79.0
June, 1928.....	53.5	64.3	79.1	73.2	81.4	128.8	76.4
December, 1928.....	55.7	62.5	78.2	77.0	81.2	131.1	77.4
June, 1929.....	59.2	62.5	77.3	72.8	81.2	130.4	78.1
December, 1929.....	57.9	61.7	77.8	77.5	79.4	130.6	77.8
Houston, Tex.:							
December, 1915.....	¹ 11.0	2.7	¹ 2.3	1.9	6.1	1.3	1.3
December, 1916.....	19.9	25.0	¹ 7.3	8.3	29.6	16.4	16.4
December, 1917.....	57.3	51.5	¹ 7.7	22.7	62.3	44.9	44.9
December, 1918.....	86.1	117.3	¹ 1.7	47.5	119.9	67.6	75.7
June, 1919.....	85.7	134.8	1.9	37.6	144.5	72.3	80.2
December, 1919.....	97.5	192.0	13.4	60.0	181.8	88.2	101.7
June, 1920.....	107.5	211.3	25.3	55.1	213.9	90.4	112.2
December, 1920.....	83.2	187.0	35.1	74.2	208.2	103.9	104.0
May, 1921.....	45.6	143.4	39.4	46.0	173.7	100.8	79.7
December, 1921.....	50.1	104.9	39.8	39.4	148.2	99.0	73.6
June, 1922.....	38.9	98.4	38.5	32.9	133.7	94.0	65.9
December, 1922.....	45.0	98.2	37.3	39.2	140.4	93.0	68.4
June, 1923.....	41.2	100.4	36.7	36.5	150.2	91.5	67.2
December, 1923.....	46.4	102.6	36.4	55.8	148.2	93.2	70.6
June, 1924.....	37.3	100.8	34.9	45.0	143.7	89.5	65.0
December, 1924.....	54.4	95.6	34.7	44.3	143.0	88.0	70.5
June, 1925.....	57.3	95.6	34.3	38.7	142.5	87.8	71.1
December, 1925.....	65.8	92.5	33.0	45.2	143.2	89.0	74.3
June, 1926.....	55.0	91.2	32.9	38.2	138.6	87.4	69.2
December, 1926.....	59.8	88.9	32.6	43.7	137.9	86.8	70.6
June, 1927.....	50.4	86.8	32.2	32.8	136.7	86.6	66.3
December, 1927.....	52.5	86.2	31.8	34.3	134.1	91.8	67.6
June, 1928.....	45.6	85.8	30.4	29.2	132.0	89.7	64.1
December, 1928.....	51.4	86.4	30.1	33.6	131.1	89.3	66.4
June, 1929.....	51.1	84.7	27.5	29.1	129.0	92.1	66.1
December, 1929.....	55.8	84.1	27.1	31.8	129.5	92.5	68.0
Jacksonville, Fla.:							
December, 1915.....	1.3	10.5	¹ 6.9	(⁹)	15.1	1.3	1.3
December, 1916.....	17.6	33.7	¹ 18.2	2.3	43.4	14.7	14.7
December, 1917.....	50.8	71.9	¹ 18.7	15.1	73.7	41.6	41.9
December, 1918.....	76.2	130.5	5.9	55.2	126.5	60.5	71.5
June, 1919.....	74.2	39.8	9.7	49.2	140.0	65.9	77.5

¹ Decrease.⁹ No change.

TABLE 5.—CHANGES IN COST OF LIVING IN 19 CITIES, DECEMBER, 1914, TO DECEMBER, 1929—Continued

City and date	Per cent of increase over December, 1914, in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
Jacksonville, Fla.—Continued.							
December, 1919.....	80.9	217.2	22.0	64.1	186.2	80.9	101.5
June, 1920.....	90.1	234.0	28.9	72.6	224.2	102.8	116.5
December, 1920.....	65.6	209.3	34.1	92.6	222.3	105.6	106.2
May, 1921.....	32.6	167.5	36.5	80.7	182.7	107.5	85.8
December, 1921.....	40.6	117.9	38.3	68.9	134.9	99.3	75.1
June, 1922.....	30.6	99.9	35.3	58.9	115.3	95.5	65.7
December, 1922.....	34.8	99.3	35.1	65.7	127.1	94.7	67.8
June, 1923.....	32.0	101.1	34.3	63.6	137.9	95.3	67.7
December, 1923.....	39.9	104.5	33.4	75.1	139.4	96.6	71.9
June, 1924.....	30.2	102.7	33.3	72.1	132.9	95.0	67.3
December, 1924.....	40.0	94.6	33.5	72.9	132.4	99.1	70.4
June, 1925.....	41.8	94.0	33.5	69.3	134.0	99.3	70.9
December, 1925.....	58.3	93.6	55.3	87.1	135.6	105.3	81.7
June, 1926.....	53.4	93.4	66.6	95.3	134.7	105.5	81.8
December, 1926.....	53.5	90.9	69.9	91.2	128.1	105.7	81.3
June, 1927.....	45.0	88.0	57.2	87.8	126.0	104.5	75.7
December, 1927.....	41.3	85.4	51.2	84.0	124.6	104.5	73.0
June, 1928.....	36.4	85.0	32.3	74.4	119.2	105.1	68.3
December, 1928.....	40.0	84.6	27.4	78.9	119.6	105.1	69.1
June, 1929.....	37.4	83.9	19.8	77.1	117.8	105.1	66.9
December, 1929.....	40.8	82.4	13.2	75.0	113.9	101.0	65.8
Los Angeles, Calif.:							
December, 1915.....	14.1	2.8	12.7	.4	6.3	11.9	11.9
December, 1916.....	.4	14.3	12.5	2.3	23.1	7.7	7.7
December, 1917.....	33.4	45.0	1.6	10.4	56.4	28.9	28.9
December, 1918.....	61.8	109.1	4.4	18.3	118.5	52.0	58.0
June, 1919.....	60.7	123.3	8.7	18.6	134.2	59.1	65.1
December, 1919.....	71.0	167.6	26.8	35.3	175.5	76.9	85.3
June, 1920.....	90.8	184.5	42.6	53.5	202.2	86.6	101.7
December, 1920.....	62.7	166.6	71.4	53.5	202.2	100.6	96.7
May, 1921.....	33.2	127.4	85.3	52.7	156.6	96.8	78.7
December, 1921.....	38.4	94.3	90.1	52.7	143.2	99.6	76.4
June, 1922.....	30.6	81.3	95.6	39.1	128.8	103.8	72.5
December, 1922.....	39.4	78.0	94.8	35.6	138.1	101.2	74.5
June, 1923.....	36.2	82.5	97.7	33.7	153.6	100.8	75.1
December, 1923.....	42.1	83.0	100.9	34.1	152.0	104.2	78.8
June, 1924.....	35.2	81.4	99.4	33.6	136.1	105.4	75.1
December, 1924.....	38.8	80.4	93.3	34.4	137.7	104.2	75.4
June, 1925.....	44.1	79.0	83.6	34.0	133.9	108.9	76.9
December, 1925.....	48.7	77.7	73.7	34.4	133.7	110.6	77.4
June, 1926.....	39.9	75.7	67.4	34.1	126.7	104.7	71.2
December, 1926.....	44.7	75.2	61.7	34.8	123.8	105.7	72.2
June, 1927.....	40.4	74.0	59.9	61.0	120.4	108.2	71.5
December, 1927.....	40.4	71.6	57.7	56.8	118.6	108.0	70.6
June, 1928.....	34.9	71.4	54.1	56.5	110.7	107.2	67.4
December, 1928.....	44.7	70.5	49.8	51.5	108.4	110.9	71.0
June, 1929.....	41.2	69.3	45.2	50.6	106.5	111.1	68.9
December, 1929.....	40.9	69.3	43.7	51.4	105.9	111.7	68.7
Mobile, Ala.:							
December, 1915.....	11.0	2.0	11.9	(²)	4.1	1.4	1.4
December, 1916.....	19.9	9.0	14.3	8.8	15.3	13.8	13.8
December, 1917.....	57.3	38.8	13.6	27.1	42.8	43.2	43.2
December, 1918.....	80.6	86.0	11.2	57.1	108.3	72.4	71.4
June, 1919.....	83.6	94.0	11.9	66.6	113.9	75.3	76.6
December, 1919.....	98.4	123.7	29.6	75.6	153.3	87.0	94.5
June, 1920.....	110.5	137.4	34.6	86.3	177.9	100.3	107.0
December, 1920.....	73.5	122.2	53.6	122.3	175.4	100.7	93.3
May, 1921.....	39.1	90.6	53.3	102.1	140.7	96.9	70.8
December, 1921.....	42.4	57.7	49.9	98.2	116.9	94.3	63.6
June, 1922.....	33.2	49.7	47.7	84.4	97.8	87.5	55.3
December, 1922.....	39.1	50.8	43.8	96.4	97.9	91.0	58.8
June, 1923.....	37.7	51.8	42.5	93.3	114.0	89.8	58.6
December, 1923.....	44.7	55.4	42.6	98.1	114.8	91.3	62.6
June, 1924.....	33.4	54.3	41.4	91.4	109.3	93.7	58.0
December, 1924.....	49.7	53.4	40.9	90.2	107.2	94.3	63.9
June, 1925.....	50.3	52.0	40.1	85.6	104.3	95.5	63.9
December, 1925.....	50.0	49.4	40.4	89.1	103.7	102.0	68.5
June, 1926.....	53.1	49.5	39.7	94.6	100.8	102.2	66.2
December, 1926.....	58.0	48.8	40.5	97.7	96.4	102.2	68.1
June, 1927.....	52.0	47.6	40.4	90.4	97.2	102.4	65.2
December, 1927.....	51.1	47.6	41.9	92.1	97.2	104.0	65.5
June, 1928.....	45.4	47.5	41.0	90.0	93.3	107.3	63.5
December, 1928.....	49.6	48.1	41.6	92.1	92.3	108.3	65.7
June, 1929.....	47.5	47.2	41.0	84.0	87.9	108.1	64.0
December, 1929.....	49.0	47.2	40.6	85.8	87.3	108.3	64.8

¹ Decrease.² No change.

TABLE 5.—CHANGES IN COST OF LIVING IN 19 CITIES, DECEMBER, 1914, TO DECEMBER, 1929—Continued

City and date	Per cent of increase over December, 1914, in expenditure for—					
	Food	Clothing	Rent	Fuel and light	House-furnish-ing goods	Miscel-laneous
New York, N. Y.:						
December, 1915.....	1.3	4.8	10.1	10.1	8.4	2.0
December, 1916.....	16.3	22.3	1.1	11.0	27.6	14.9
December, 1917.....	55.3	54.2	2.6	19.9	56.5	44.7
December, 1918.....	82.6	131.3	6.5	45.5	126.5	70.0
June, 1919.....	75.3	151.6	13.4	45.4	136.6	75.1
December, 1919.....	91.0	219.7	23.4	50.6	172.9	95.8
June, 1920.....	105.3	241.4	32.4	60.1	205.1	111.9
December, 1920.....	73.5	201.8	38.1	87.5	185.9	116.3
May, 1921.....	42.5	159.5	42.2	95.9	156.5	117.6
December, 1921.....	51.8	117.8	53.7	90.7	132.0	116.9
June, 1922.....	40.0	103.0	55.7	89.0	118.3	112.8
December, 1922.....	49.5	98.3	56.7	95.7	121.6	111.6
June, 1923.....	44.4	100.7	59.4	89.1	130.3	110.8
December, 1923.....	52.0	102.7	62.4	94.2	131.5	113.5
June, 1924.....	41.1	100.7	64.5	88.8	121.4	115.0
December, 1924.....	50.0	97.7	67.1	93.3	119.4	116.7
June, 1925.....	48.9	97.5	67.8	91.0	110.6	116.9
December, 1925.....	62.6	95.9	69.5	126.0	110.4	118.2
June, 1926.....	56.0	94.7	69.5	95.9	106.6	117.3
December, 1926.....	59.1	93.7	70.2	96.1	106.0	117.5
June, 1927.....	54.0	92.9	70.2	92.2	102.5	119.0
December, 1927.....	57.5	91.4	70.2	96.0	102.9	118.8
June, 1928.....	47.5	90.3	69.3	94.4	97.8	118.6
December, 1928.....	53.0	88.4	68.6	96.3	96.4	118.8
June, 1929.....	50.6	87.8	67.6	92.0	96.2	121.4
December, 1929.....	54.9	85.9	66.1	95.1	95.4	122.9
Norfolk, Va.:						
December, 1915.....	.8	.8	.1	(2)	.6	.6
December, 1916.....	22.4	6.0	11.7	17.0	8.7	14.7
December, 1917.....	63.9	31.6	11.7	33.3	39.0	45.2
December, 1918.....	86.2	94.6	39.0	74.6	105.5	76.8
June, 1919.....	89.8	104.8	46.5	69.7	110.7	83.7
December, 1919.....	91.5	158.4	63.3	89.9	143.6	97.5
June, 1920.....	107.6	176.5	70.8	110.6	165.0	108.4
December, 1920.....	76.3	153.6	90.8	128.9	160.5	106.3
May, 1921.....	45.4	121.6	94.6	97.3	129.0	106.3
December, 1921.....	43.4	90.2	93.4	91.6	106.1	109.3
June, 1922.....	33.5	77.6	88.1	87.7	88.4	100.8
December, 1922.....	38.6	73.2	77.2	106.5	89.1	99.6
June, 1923.....	36.9	79.1	73.0	102.1	101.0	102.2
December, 1923.....	40.7	80.8	67.0	96.9	103.8	104.4
June, 1924.....	33.1	78.6	64.2	94.4	100.1	103.0
December, 1924.....	46.0	75.4	59.4	99.1	102.1	103.4
June, 1925.....	47.9	74.7	58.4	96.7	96.0	103.4
December, 1925.....	60.8	74.0	53.0	107.9	96.8	103.8
June, 1926.....	56.0	73.0	52.1	102.1	93.7	100.5
December, 1926.....	58.7	72.8	49.2	109.6	90.4	103.7
June, 1927.....	54.7	71.1	45.9	96.8	88.9	114.9
December, 1927.....	55.5	70.9	43.6	98.2	88.5	112.5
June, 1928.....	50.2	71.6	41.7	95.6	85.7	114.6
December, 1928.....	55.0	71.8	39.6	100.3	86.1	118.2
June, 1929.....	51.9	71.3	38.8	94.3	85.2	118.0
December, 1929.....	55.8	70.4	37.1	92.7	83.0	119.3
Philadelphia, Pa.:						
December, 1915.....	.3	3.6	1.3	1.8	6.9	1.2
December, 1916.....	18.9	16.0	1.7	5.4	19.9	14.7
December, 1917.....	54.4	51.3	2.6	21.5	49.8	43.8
December, 1918.....	80.7	111.2	8.0	47.9	107.7	67.5
June, 1919.....	75.5	135.9	11.3	43.3	117.8	71.2
December, 1919.....	87.2	190.3	16.7	51.3	162.8	88.6
June, 1920.....	101.7	219.6	28.6	66.8	187.4	102.8
December, 1920.....	68.1	183.5	38.0	96.0	183.4	122.3
May, 1921.....	37.8	144.7	44.2	85.6	135.5	119.2
December, 1921.....	45.9	104.6	48.1	92.0	101.6	116.2
June, 1922.....	38.1	80.5	49.6	85.7	90.0	112.3
December, 1922.....	43.4	87.6	52.9	93.0	96.9	110.7
June, 1923.....	42.7	87.6	58.1	89.9	110.8	112.4
December, 1923.....	45.1	88.2	66.9	102.2	111.6	112.0
June, 1924.....	39.3	85.5	72.4	91.7	102.3	110.7
December, 1924.....	46.4	84.4	75.3	94.8	100.5	117.6
June, 1925.....	51.3	83.8	76.0	87.0	98.9	117.6
December, 1925.....	62.0	83.6	77.1	100.5	97.9	117.6
June, 1926.....	56.6	82.5	77.1	98.3	93.7	120.6
December, 1926.....	61.2	80.3	77.3	98.5	92.3	121.5

¹ Decrease.² No change.

TABLE 5.—CHANGES IN COST OF LIVING IN 19 CITIES, DECEMBER, 1914, TO DECEMBER, 1929—Continued

City and date	Per cent of increase over December, 1914, in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnish-ing goods	Miscel-laneous	All items
Philadelphia, Pa.—Continued.							
June, 1927.....	53.8	79.2	75.3	89.4	88.6	120.8	78.0
December, 1927.....	55.9	77.4	72.1	90.5	87.7	121.2	78.3
June, 1928.....	51.3	76.5	67.1	81.5	85.4	121.4	75.3
December, 1928.....	51.7	74.0	63.8	87.3	83.9	120.3	74.5
June, 1929.....	50.0	72.6	59.9	85.4	84.1	121.2	73.1
December, 1929.....	56.1	71.2	56.5	86.3	84.7	121.2	75.0
Portland, Me.:							
December, 1915.....	12.0	2.1	.2	.4	6.2	1.4	1.4
December, 1916.....	18.6	9.7	.6	11.4	20.9	13.8	13.8
December, 1917.....	49.8	32.8	2.4	28.9	43.5	38.0	38.0
December, 1918.....	86.8	85.8	2.5	67.7	110.8	65.6	72.2
June, 1919.....	80.6	103.8	5.7	58.4	126.4	72.1	74.3
December, 1919.....	91.9	148.5	10.7	69.8	163.7	83.2	91.6
June, 1920.....	114.5	165.9	14.5	83.9	190.3	89.4	107.6
December, 1920.....	78.7	147.8	20.0	113.5	191.2	94.3	93.1
May, 1921.....	46.7	116.3	23.1	96.8	152.2	94.1	72.1
December, 1921.....	54.8	88.1	26.6	99.5	123.6	91.2	69.6
June, 1922.....	39.9	76.7	24.8	96.1	108.1	88.2	59.7
December, 1922.....	49.1	74.8	30.7	94.7	114.2	88.0	64.1
June, 1923.....	45.3	77.3	27.3	94.9	129.7	88.0	63.3
December, 1923.....	52.3	76.7	31.7	100.0	130.2	89.3	66.9
June, 1924.....	44.1	75.4	27.4	96.2	126.7	87.9	62.4
December, 1924.....	52.4	75.0	28.8	99.6	126.0	87.2	66.0
June, 1925.....	52.2	75.0	25.5	95.8	126.0	87.8	65.3
December, 1925.....	64.5	74.0	24.4	100.3	126.9	87.6	70.3
June, 1926.....	58.7	71.7	23.7	100.5	121.7	88.4	67.3
December, 1926.....	63.3	70.3	23.8	102.9	120.8	88.6	69.2
June, 1927.....	59.4	67.6	23.6	98.6	118.8	88.6	66.8
December, 1927.....	60.0	66.8	23.0	102.2	118.4	89.0	67.0
June, 1928.....	54.2	66.5	21.5	98.4	112.5	88.8	63.8
December, 1928.....	57.0	64.8	20.9	102.4	112.3	97.3	66.6
June, 1929.....	54.3	65.8	19.8	94.1	112.3	97.3	64.8
December, 1929.....	55.7	65.6	19.8	101.9	112.1	97.1	65.8
Portland, Oreg.:							
December, 1915.....	13.8	3.0	10.9	11.0	2.9	13.1	13.1
December, 1916.....	9.8	15.8	19.6	3.4	18.0	6.1	6.1
December, 1917.....	42.2	44.4	22.2	20.2	54.5	31.2	31.2
December, 1918.....	70.6	96.6	12.3	30.9	109.0	57.9	64.2
June, 1919.....	67.1	115.5	20.2	31.3	122.1	62.3	69.2
December, 1919.....	81.6	142.1	27.7	42.3	145.1	71.6	83.7
June, 1920.....	107.1	158.6	33.2	46.9	183.9	79.7	100.4
December, 1920.....	60.9	122.1	36.9	65.9	179.9	81.1	80.3
May, 1921.....	26.0	91.2	42.9	67.1	148.0	81.1	62.2
December, 1921.....	33.1	65.3	43.3	59.4	121.9	90.0	58.3
June, 1922.....	26.5	53.2	43.3	50.3	101.9	78.5	52.1
December, 1922.....	34.3	54.9	43.6	65.7	102.9	79.4	56.1
June, 1923.....	29.5	61.3	42.5	61.3	109.8	75.8	54.6
December, 1923.....	35.1	61.8	42.7	67.1	109.0	79.6	57.8
June, 1924.....	28.5	61.1	43.3	55.5	102.2	73.0	52.8
December, 1924.....	36.1	59.2	42.9	62.4	102.2	74.4	55.8
June, 1925.....	40.6	57.6	40.9	52.2	98.6	73.0	55.8
December, 1925.....	43.2	57.0	40.1	60.0	100.6	73.0	56.9
June, 1926.....	38.6	56.5	37.9	50.9	95.2	74.2	54.6
December, 1926.....	40.6	54.0	33.5	61.9	90.7	76.6	55.1
June, 1927.....	39.2	53.2	30.3	56.9	87.8	76.4	53.7
December, 1927.....	37.5	51.1	26.9	65.7	86.1	77.1	52.8
June, 1928.....	36.6	50.8	20.9	51.6	80.5	76.4	50.5
December, 1928.....	41.8	49.4	16.4	63.0	80.1	78.0	52.4
June, 1929.....	41.4	48.4	11.0	51.4	79.7	77.3	50.7
December, 1929.....	43.7	47.8	8.2	61.8	81.0	77.7	51.6
San Francisco and Oakland, Calif.:							
December, 1915.....	14.3	2.5	1.7	1.1	6.0	1.7	1.7
December, 1916.....	9.6	14.5	2.5	4.6	21.7	8.3	8.3
December, 1917.....	35.9	43.6	4.0	14.4	48.2	28.6	28.6
December, 1918.....	66.2	109.0	13.9	30.1	103.4	50.5	57.8
June, 1919.....	63.3	134.6	13.5	28.9	116.6	61.0	65.6
December, 1919.....	74.2	170.4	4.7	41.3	143.8	74.7	87.8
June, 1920.....	93.9	191.0	9.4	47.2	180.1	79.6	96.0
December, 1920.....	64.9	175.9	15.0	66.3	175.6	84.8	85.1
May, 1921.....	33.3	140.9	21.7	63.3	143.9	84.4	66.7
December, 1921.....	40.4	106.3	25.8	65.3	113.9	86.8	63.6
June, 1922.....	31.1	90.7	29.4	59.5	104.4	83.7	56.8
December, 1922.....	38.8	85.4	30.0	52.5	105.4	84.2	58.8
June, 1923.....	34.2	92.1	33.4	42.6	116.7	79.4	57.6

¹ Decrease.

TABLE 5.—CHANGES IN COST OF LIVING IN 19 CITIES, DECEMBER, 1914, TO DECEMBER, 1929—Continued

City and date	Per cent of increase over December, 1914, in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnish-ing goods	Miscel-laneous	All items
San Francisco and Oakland, Calif.—							
Continued.							
December, 1923.....	42.3	94.4	36.0	48.8	116.9	81.2	62.1
June, 1924.....	35.0	91.5	38.0	49.9	113.4	73.2	57.3
December, 1924.....	42.1	90.5	39.4	53.5	114.7	72.7	60.1
June, 1925.....	47.6	90.5	40.1	54.3	115.1	72.9	62.2
December, 1925.....	53.3	89.7	40.0	50.8	115.7	74.6	64.7
June, 1926.....	44.3	88.4	39.6	48.5	105.6	75.3	60.7
December, 1926.....	48.3	85.6	39.5	51.0	104.6	75.3	61.7
June, 1927.....	45.4	83.7	38.7	47.1	103.8	77.8	60.5
December, 1927.....	46.1	82.4	37.3	48.6	103.4	79.2	60.7
June, 1928.....	41.5	82.9	35.7	45.9	102.0	79.6	58.8
December, 1928.....	48.0	83.4	33.5	47.5	99.0	83.2	61.7
June, 1929.....	45.1	82.8	31.9	43.7	97.8	83.4	60.1
December, 1929.....	48.7	81.5	30.4	40.3	97.4	82.5	60.8
Savannah, Ga.:							
December, 1915.....	1.3	.8	1.4	1.3	1.8	1.2	1.2
December, 1916.....	17.6	24.1	13.0	11.7	12.8	14.6	14.6
December, 1917.....	50.8	56.6	14.3	21.1	50.7	42.5	42.5
December, 1918.....	76.2	133.6	5.9	37.5	128.6	67.3	75.0
June, 1919.....	74.2	146.3	10.2	35.5	136.5	71.2	79.8
December, 1919.....	80.9	195.9	22.0	52.2	182.1	82.0	98.7
June, 1920.....	91.7	212.1	33.5	65.3	207.2	83.8	109.4
December, 1920.....	63.5	171.5	58.6	94.4	206.6	91.5	98.7
May, 1921.....	28.7	133.2	61.9	74.2	175.9	93.0	77.6
December, 1921.....	33.7	84.2	60.9	66.1	133.7	87.4	66.2
June, 1922.....	22.7	71.7	57.8	55.2	120.1	81.1	56.8
December, 1922.....	27.6	76.2	52.7	68.3	123.8	79.5	59.2
June, 1923.....	22.6	81.3	49.5	61.9	135.9	77.4	57.9
December, 1923.....	25.0	80.9	47.5	64.1	133.4	76.7	58.2
June, 1924.....	17.5	79.1	45.3	59.7	130.6	77.5	54.8
December, 1924.....	25.1	75.8	41.0	62.2	128.7	77.5	56.3
June, 1925.....	31.5	75.1	39.7	59.1	128.2	77.5	57.9
December, 1925.....	44.9	73.7	38.6	62.9	128.9	79.1	62.9
June, 1926.....	39.1	73.7	38.0	61.9	126.6	79.5	60.6
December, 1926.....	39.7	72.0	38.1	68.4	123.9	79.0	60.5
June, 1927.....	35.4	69.8	37.7	58.3	121.7	80.6	58.3
December, 1927.....	35.3	68.6	37.1	59.9	121.9	80.8	58.1
June, 1928.....	31.1	68.8	35.9	56.9	120.8	81.9	56.6
December, 1928.....	35.0	69.0	33.9	59.6	118.8	87.0	59.1
June, 1929.....	33.9	68.2	32.7	55.8	117.9	83.8	57.2
December, 1929.....	35.1	67.7	28.3	56.1	117.2	84.5	57.2
Seattle, Wash.:							
December, 1915.....	12.8	1.2	12.4	1.2	8.5	11.0	11.0
December, 1916.....	8.5	11.3	15.4	2.9	27.4	7.4	7.4
December, 1917.....	38.7	36.4	1.6	23.9	52.3	31.1	31.1
December, 1918.....	72.5	88.0	44.3	51.8	141.5	58.5	69.9
June, 1919.....	69.3	110.2	51.5	51.8	154.4	71.4	76.9
December, 1919.....	80.9	154.5	71.5	63.8	201.0	86.8	97.7
June, 1920.....	102.3	173.9	74.8	65.8	221.2	90.4	110.5
December, 1920.....	54.1	160.5	76.7	78.7	216.4	95.5	94.1
May, 1921.....	27.1	128.7	74.8	78.7	177.2	105.5	80.2
December, 1921.....	30.5	88.7	69.2	69.0	149.9	102.6	71.5
June, 1922.....	30.0	78.0	64.7	64.0	137.3	97.6	67.0
December, 1922.....	33.9	74.2	63.1	59.6	136.1	96.4	66.7
June, 1923.....	31.0	76.7	62.3	58.0	143.9	96.6	66.4
December, 1923.....	35.8	77.6	62.9	59.1	144.2	96.6	68.5
June, 1924.....	33.1	76.2	64.0	56.8	140.7	94.6	66.7
December, 1924.....	35.8	74.4	63.7	59.6	141.1	96.4	67.8
June, 1925.....	43.7	74.6	64.7	57.8	141.6	96.4	70.5
December, 1925.....	47.3	74.8	63.7	58.1	142.1	97.0	71.7
June, 1926.....	42.3	74.8	62.6	49.4	139.4	97.0	69.4
December, 1926.....	41.6	73.1	60.3	61.2	137.5	97.6	69.1
June, 1927.....	43.0	71.9	59.0	59.3	136.8	96.4	69.4
December, 1927.....	37.9	69.5	56.9	59.8	134.7	98.2	66.9
June, 1928.....	36.9	68.8	55.5	57.1	133.5	97.4	65.8
December, 1928.....	40.8	68.3	54.1	62.9	132.6	97.4	67.1
June, 1929.....	43.7	66.6	52.4	62.1	131.7	96.8	67.7
December, 1929.....	45.9	66.6	52.1	65.8	132.6	98.8	68.7
Washington, D. C.:							
December, 1915.....	.6	3.7	11.5	(?)	6.8	.4	1.0
December, 1916.....	15.7	23.2	13.7	7.3	30.5	15.3	14.6
December, 1917.....	61.1	60.1	13.4	24.9	72.1	44.3	47.3
December, 1918.....	90.9	112.6	11.5	40.9	127.4	55.9	73.8
April, 1919.....	84.6	109.5	11.4	41.8	126.0	57.4	71.2
November, 1919.....	93.3	105.9	5.4	42.8	159.3	62.7	87.6
June, 1920.....	108.4	184.0	15.6	53.7	196.4	68.2	101.3
December, 1920.....	79.0	151.1	24.7	68.0	194.0	73.9	87.8
May, 1921.....	47.4	115.9	28.8	57.1	149.0	72.0	67.1

¹ Decrease.² No change.

TABLE 5.—CHANGES IN COST OF LIVING IN 19 CITIES, DECEMBER, 1914, TO DECEMBER 1929—Continued

City and date	Per cent of increase over December, 1914, in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnish-ing goods	Miscel-laneous	All items
Washington, D. C.—Continued.							
December, 1921.....	51.1	87.1	30.4	49.9	122.4	75.8	63.0
June, 1922.....	44.3	77.5	31.4	44.5	108.1	73.7	57.6
December, 1922.....	49.2	74.8	32.6	55.1	112.6	72.0	59.5
June, 1923.....	48.8	78.9	33.9	51.2	129.0	72.5	60.9
December, 1923.....	52.3	81.2	34.3	47.0	128.8	74.9	63.2
June, 1924.....	43.7	78.9	35.7	42.9	124.5	75.0	59.2
December, 1924.....	53.6	75.8	36.7	44.9	125.2	76.5	63.1
June, 1925.....	57.2	75.4	37.7	39.8	119.8	76.5	64.0
December, 1925.....	65.6	73.5	40.3	48.7	115.0	75.4	67.3
June, 1926.....	63.3	73.3	38.6	41.7	112.6	75.0	65.5
December, 1926.....	66.3	70.9	37.4	45.7	107.5	75.0	66.0
June, 1927.....	55.0	69.2	36.4	39.3	104.4	73.6	60.5
December, 1927.....	57.9	67.0	33.8	40.3	103.2	73.8	60.8
June, 1928.....	55.5	67.0	32.7	38.8	102.2	73.6	59.7
December, 1928.....	58.2	65.2	31.0	41.0	99.4	73.8	60.2
June, 1929.....	58.4	64.4	30.5	38.0	100.0	74.0	60.0
December, 1929.....	57.4	62.3	30.0	39.7	100.2	74.3	59.2

Table 6 shows the changes in the cost of living from December, 1917, to December, 1929, for 13 cities. The table is constructed in the same manner as the preceding one and differs from it only in the base period and in the length of time covered.

TABLE 6.—CHANGES IN COST OF LIVING IN 13 CITIES, DECEMBER, 1917, TO DECEMBER, 1929

City and date	Per cent of increase over December, 1917, in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnish-ing goods	Miscel-laneous	All items
Atlanta, Ga.:							
December, 1918.....	19.0	29.1	14.0	17.0	24.9	14.8	19.7
June, 1919.....	18.0	40.7	14.5	17.9	30.1	21.5	23.3
December, 1919.....	27.9	66.9	32.6	30.8	49.9	31.7	37.9
June, 1920.....	34.0	80.5	40.4	61.0	65.0	34.6	46.7
December, 1920.....	12.8	56.5	73.1	66.8	58.4	39.7	38.5
May, 1921.....	¹ 8.9	35.2	78.8	56.1	38.0	40.5	25.2
December, 1921.....	¹ 7.2	8.3	75.4	43.7	23.0	39.7	18.7
June, 1922.....	¹ 10.5	.4	68.1	39.1	15.2	34.5	13.7
December, 1922.....	¹ 8.9	2.8	62.7	57.6	17.4	34.1	15.1
June, 1923.....	¹ 10.3	5.9	61.4	42.7	23.9	32.8	14.2
December, 1923.....	¹ 6.3	6.9	62.2	39.3	23.5	33.3	16.0
June, 1924.....	¹ 10.2	5.7	60.1	32.0	20.4	33.8	13.6
December, 1924.....	¹ 5.5	4.9	56.9	33.1	20.4	33.7	14.9
June, 1925.....	¹ 1.2	4.5	55.5	26.2	19.9	34.9	16.2
December, 1925.....	6.5	4.3	49.3	34.7	18.8	35.6	19.0
June, 1926.....	4.5	3.9	44.4	36.6	17.4	34.0	17.3
December, 1926.....	4.3	2.9	42.1	46.0	15.5	33.9	17.4
June, 1927.....	4.1	2.1	41.5	31.7	14.6	33.9	16.2
December, 1927.....	1.3	.2	39.5	38.0	15.9	31.5	14.3
June, 1928.....	¹ 1.0	.2	38.9	31.8	15.2	35.6	13.9
December, 1928.....	2.9	.4	38.2	36.3	14.9	35.3	15.6
June, 1929.....	.3	.3	37.5	28.4	14.6	33.0	13.6
December, 1929.....	.1	¹ 1.6	35.9	31.6	14.1	34.2	13.5
Birmingham, Ala.:							
December, 1918.....	17.7	23.9	8.1	22.8	19.4	13.8	17.0
June, 1919.....	18.3	29.8	12.8	31.9	20.2	16.3	19.8
December, 1919.....	26.5	57.6	34.9	39.8	45.1	26.8	34.3
June, 1920.....	36.4	66.4	40.3	55.3	55.6	28.7	41.9
December, 1920.....	11.9	45.1	68.5	74.2	48.1	30.4	33.3
May, 1921.....	¹ 9.1	24.8	77.4	54.3	32.0	33.8	22.1
December, 1921.....	¹ 8.5	¹ 4	70.9	44.1	12.0	35.5	16.2
June, 1922.....	¹ 13.1	¹ 6.1	67.0	25.0	3.3	30.4	10.7
December, 1922.....	¹ 9.9	¹ 1.7	62.3	49.9	8.9	29.6	13.2
June, 1923.....	¹ 9.9	1.8	63.1	40.7	17.8	28.5	13.6
December, 1923.....	¹ 6.6	3.8	67.9	50.2	19.7	27.2	16.0
June, 1924.....	¹ 12.6	3.2	68.6	40.5	14.3	27.2	13.1
December, 1924.....	¹ 3.1	1.6	68.6	45.7	14.9	27.3	16.8
June, 1925.....	¹ 9	1.5	68.3	33.8	15.5	27.2	16.9
December, 1925.....	4.5	¹ 3	68.0	41.4	15.5	27.8	19.2

¹ Decrease.

TABLE 6.—CHANGES IN COST OF LIVING IN 13 CITIES, DECEMBER, 1917, TO DECEMBER, 1929—Continued

City and date	Per cent of increase over December, 1917, in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
Birmingham, Ala.—Continued.							
June, 1926	1.5	1.9	66.5	41.0	13.5	26.9	17.5
December, 1926	1.8	1.9	65.8	51.3	12.4	26.9	17.8
June, 1927	1.3	1.3	64.5	39.6	11.2	26.4	14.8
December, 1927	1.3	1.4	61.7	45.9	14.1	28.5	15.7
June, 1928	1.4	1.3	59.4	37.1	13.9	28.2	13.7
December, 1928	1.2	1.4	54.8	43.4	12.3	27.2	14.2
June, 1929	1.3	1.4	50.8	35.5	10.6	26.1	12.3
December, 1929	1.2	1.5	40.8	38.8	10.5	27.2	11.8
Cincinnati, Ohio:							
December, 1918	15.3	33.8	.2	10.0	25.7	20.4	17.3
June, 1919	18.1	48.3	.8	5.6	30.5	21.8	21.1
December, 1919	22.9	84.2	12.8	11.0	51.1	40.3	35.2
June, 1920	38.7	96.7	13.6	26.9	75.5	47.6	47.1
December, 1920	10.3	73.5	25.0	34.1	66.7	53.4	34.7
May, 1921	7.4	49.0	27.6	15.7	39.7	52.3	21.7
December, 1921	18.3	13.9	28.5	42.4	22.3	47.3	15.3
June, 1922	18.9	4.9	31.0	35.2	15.8	44.0	12.7
December, 1922	10.4	5.5	35.2	61.0	17.2	42.7	13.8
June, 1923	9.3	8.8	40.7	51.9	24.3	42.8	15.5
December, 1923	6.7	9.2	45.6	53.0	26.2	43.3	17.7
June, 1924	10.2	6.4	49.3	39.3	23.2	46.9	16.3
December, 1924	18.3	1.5	50.1	44.5	23.2	52.3	17.6
June, 1925	1.9	1.2	51.2	61.1	23.4	55.0	22.1
December, 1925	3.9	1.1	51.8	70.4	21.3	49.9	23.0
June, 1926	2.7	1.2	54.8	62.2	17.7	50.5	22.6
December, 1926	3.1	1.7	55.9	83.6	16.9	50.5	23.8
June, 1927	3.9	1.3	56.8	66.7	16.1	50.0	23.3
December, 1927	1.0	1.9	57.9	66.9	16.6	50.0	21.3
June, 1928	1.5	1.9	57.1	61.1	15.4	49.7	21.0
December, 1928	.4	1.5	57.1	61.6	14.7	49.6	21.2
June, 1929	2.5	1.8	56.9	60.8	13.6	49.7	21.8
December, 1929	4.5	1.4	56.7	70.9	13.1	51.2	23.1
Denver, Colo.:							
December, 1918	20.0	40.1	12.8	8.1	22.6	14.8	20.7
June, 1919	20.7	53.2	21.8	8.4	31.3	17.7	25.3
December, 1919	26.0	82.1	33.5	19.6	46.3	32.3	38.2
June, 1920	41.5	96.8	51.9	22.3	60.2	35.4	50.3
December, 1920	7.9	78.3	69.8	47.1	58.9	38.8	38.7
May, 1921	13.1	53.9	76.9	37.5	42.5	42.8	26.9
December, 1921	18.8	82.6	39.7	27.9	43.1	24.5	27.5
June, 1922	14.2	15.3	84.8	32.8	20.4	38.1	18.8
December, 1922	9.0	16.6	86.9	40.7	21.2	37.6	21.6
June, 1923	11.5	16.9	85.4	30.4	26.1	37.1	19.9
December, 1923	8.7	17.9	88.9	37.2	27.0	36.8	22.1
June, 1924	13.5	16.1	84.4	19.7	23.8	35.1	17.8
December, 1924	7.8	15.1	84.0	25.4	24.2	35.6	20.2
June, 1925	5.3	14.5	82.5	27.0	24.8	35.6	21.1
December, 1925	1.3	13.1	78.5	37.4	25.2	35.6	22.5
June, 1926	3.8	12.4	71.9	25.3	24.2	35.1	19.7
December, 1926	3.0	11.8	65.5	38.1	23.5	36.6	20.4
June, 1927	2.8	10.1	61.2	20.8	22.9	36.1	18.4
December, 1927	6.9	8.9	58.3	32.9	21.2	34.2	16.6
June, 1928	8.6	8.4	55.8	26.9	20.5	33.4	14.9
December, 1928	6.3	8.2	54.1	39.3	19.8	33.8	16.3
June, 1929	7.4	8.0	52.3	19.0	17.4	38.8	15.6
December, 1929	6.8	7.9	51.1	20.2	16.0	38.7	16.1
Indianapolis, Ind.:							
December, 1918	17.8	32.4	1.6	19.8	18.9	21.9	19.1
June, 1919	16.4	40.1	2.6	16.7	24.8	26.8	21.1
December, 1919	28.2	73.8	11.6	27.3	48.4	38.2	36.5
June, 1920	49.0	87.9	18.9	45.6	67.5	40.5	50.2
December, 1920	11.0	72.3	32.9	60.3	63.0	47.5	37.6
May, 1921	10.1	45.8	37.4	49.4	35.3	47.4	23.9
December, 1921	8.4	16.2	43.8	42.5	22.5	46.2	19.3
June, 1922	9.9	7.9	41.3	44.9	13.7	45.4	16.4
December, 1922	11.1	8.6	44.1	73.4	16.7	46.7	18.8
June, 1923	8.0	11.6	44.6	54.9	23.2	46.1	19.4
December, 1923	6.5	13.4	47.1	41.5	24.0	49.2	20.6
June, 1924	10.0	11.9	46.5	38.2	21.4	51.5	19.3
December, 1924	4.9	10.4	46.7	41.5	21.5	53.3	21.4
June, 1925	2.3	9.8	44.1	33.9	20.6	53.8	21.5
December, 1925	4.4	7.5	41.7	44.9	21.8	54.1	24.2
June, 1926	2.6	7.4	38.3	33.9	20.6	51.6	21.9
December, 1926	2.9	5.4	36.5	47.8	19.9	51.8	22.3
June, 1927	3.5	5.9	34.6	34.6	18.0	52.3	21.4
December, 1927	1.5	4.3	33.4	34.2	17.5	52.6	19.2

¹ Decrease.² The decrease is due primarily to the change in consumption and price accompanying the change from manufactured to natural gas.

TABLE 6.—CHANGES IN COST OF LIVING IN 13 CITIES, DECEMBER, 1917, TO DECEMBER, 1929—Continued

City and date	Per cent of increase over December, 1917, in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
Indianapolis, Ind.—Continued.							
June, 1928.....	¹ 1.8	4.3	31.3	29.2	13.7	52.3	18.2
December, 1928.....	¹ 0.3	3.2	30.4	32.3	12.6	52.0	18.5
June, 1929.....	¹ .8	3.0	28.4	26.1	12.7	52.3	17.7
December, 1929.....	2.0	2.4	27.9	31.0	11.7	52.0	18.8
Kansas City, Mo.:							
December, 1918.....	17.3	40.7	5.4	18.0	31.1	15.6	19.6
June, 1919.....	15.1	44.8	6.7	9.6	37.9	20.8	20.6
December, 1919.....	24.5	80.9	26.0	27.5	61.8	31.5	38.2
June, 1920.....	44.9	104.5	29.4	35.2	73.0	37.1	51.0
December, 1920.....	10.2	76.3	63.9	55.1	68.7	40.3	39.5
May, 1921.....	¹ 8.3	52.3	65.0	43.3	50.0	40.4	27.3
December, 1921.....	¹ 6.6	24.1	69.7	42.6	26.2	37.6	22.5
June, 1922.....	¹ 13.5	15.9	59.4	36.3	11.6	32.3	15.0
December, 1922.....	¹ 12.0	14.6	61.4	40.2	12.1	33.3	16.2
June, 1923.....	¹ 12.5	14.5	53.7	36.1	22.5	33.8	15.3
December, 1923.....	¹ 10.2	15.2	56.8	36.7	22.6	36.2	17.2
June, 1924.....	¹ 12.7	13.3	49.5	34.5	16.8	35.3	14.3
December, 1924.....	¹ 7.7	12.0	46.2	32.9	16.1	34.3	15.3
June, 1925.....	¹ 3.9	11.4	40.6	32.8	15.6	36.4	16.3
December, 1925.....	2.0	9.2	39.5	32.3	14.1	36.3	18.0
June, 1926.....	.5	8.7	35.9	29.4	12.8	36.3	16.6
December, 1926.....	¹ 1.7	6.3	34.1	33.5	10.8	36.3	15.2
June, 1927.....	¹ 2.2	5.4	29.1	29.8	8.6	36.6	14.0
December, 1927.....	¹ 6.8	3.7	28.3	29.0	7.7	36.5	11.9
June, 1928.....	¹ 5.4	2.7	24.8	28.7	6.8	35.0	11.2
December, 1928.....	¹ 6.0	2.9	23.8	26.8	5.6	37.8	11.3
June, 1929.....	¹ 5.3	2.4	21.1	26.3	5.1	37.0	11.0
December, 1929.....	¹ 2.2	1.8	20.1	23.9	3.4	36.9	11.7
Memphis, Tenn.:							
December, 1918.....	20.3	27.7	(¹)	26.8	25.4	16.1	18.3
June, 1919.....	22.7	38.3	8.2	23.4	30.7	20.9	23.3
December, 1919.....	28.4	66.2	23.1	34.1	53.2	28.3	35.2
June, 1920.....	38.8	77.5	35.9	49.7	67.1	38.8	46.4
December, 1920.....	7.0	59.0	66.2	105.4	53.9	43.2	39.3
May, 1921.....	¹ 14.2	36.1	79.7	64.5	29.9	42.9	26.7
December, 1921.....	¹ 11.2	15.3	77.3	67.1	14.7	42.3	23.2
June, 1922.....	¹ 15.1	7.3	74.8	56.3	6.8	37.8	18.2
December, 1922.....	¹ 14.9	6.7	72.5	68.5	12.2	37.4	18.6
June, 1923.....	¹ 13.9	9.8	72.3	62.8	23.2	38.1	19.9
December, 1923.....	¹ 11.2	11.0	72.5	65.0	23.4	37.3	21.0
June, 1924.....	¹ 17.1	9.5	72.4	66.2	18.6	36.3	18.2
December, 1924.....	¹ 9.2	6.4	68.6	66.2	20.1	37.4	20.4
June, 1925.....	¹ 7.1	5.9	66.4	55.7	20.1	38.5	20.5
December, 1925.....	¹ 2.0	4.7	60.4	71.4	20.1	37.8	22.0
June, 1926.....	¹ 4.1	4.0	57.0	63.3	18.2	36.7	19.9
December, 1926.....	¹ 5.7	3.9	53.9	80.1	17.1	37.7	19.9
June, 1927.....	¹ 7.2	1.9	50.2	79.4	16.0	36.6	18.1
December, 1927.....	¹ 8.0	1.6	47.3	76.0	16.0	36.6	17.3
June, 1928.....	¹ 8.1	1.5	46.3	60.0	16.0	36.9	16.4
December, 1928.....	¹ 4.9	.2	43.7	68.8	14.8	37.7	17.5
June, 1929.....	¹ 6.0	1.1	42.6	63.6	13.8	38.5	16.8
December, 1929.....	¹ 5.1	1.1	40.6	55.3	13.9	38.6	16.5
Minneapolis, Minn.							
December, 1918.....	17.7	33.5	¹ 1.1	14.7	18.1	12.3	15.8
June, 1919.....	21.4	40.1	¹ 2.0	13.4	23.6	15.9	18.8
December, 1919.....	34.1	67.0	8.0	22.4	45.6	25.4	32.7
June, 1920.....	50.0	76.7	10.7	36.9	65.5	31.3	43.4
December, 1920.....	13.0	63.6	36.8	60.3	65.8	37.6	35.7
May, 1921.....	¹ 7.9	41.0	39.0	52.8	43.3	37.9	23.7
December, 1921.....	¹ 4.9	14.3	46.7	50.2	27.9	37.4	20.7
June, 1922.....	¹ 6.0	7.9	44.6	43.7	21.4	32.6	17.3
December, 1922.....	¹ 5.3	6.5	46.8	47.0	22.5	32.6	18.0
June, 1923.....	¹ 6.4	9.2	42.5	44.9	29.7	32.8	17.4
December, 1923.....	¹ 4.7	9.3	47.4	45.6	28.2	32.0	18.8
June, 1924.....	¹ 7.9	7.4	44.7	42.2	22.8	31.3	16.2
December, 1924.....	¹ 4.3	5.6	44.9	43.2	23.3	31.2	17.3
June, 1925.....	¹ .8	4.9	40.7	40.9	23.2	31.1	17.6
December, 1925.....	6.9	4.4	41.0	42.6	22.1	30.6	20.3
June, 1926.....	5.8	3.4	36.8	45.9	19.9	32.8	19.6
December, 1926.....	2.3	2.5	36.1	46.6	17.0	33.5	18.2
June, 1927.....	4.1	1.1	30.2	44.3	15.1	32.6	17.2
December, 1927.....	(²)	¹ 1.4	29.9	45.6	14.9	33.0	15.4
June, 1928.....	1.6	¹ 1.1	27.2	45.2	12.3	34.6	15.8
December, 1928.....	.7	¹ 1.5	27.5	44.6	10.5	34.5	15.2

¹ Decrease.² The decrease is due primarily to the change in consumption and price accompanying the change from manufactured to natural gas.³ No change.

TABLE 6.—CHANGES IN COST OF LIVING IN 13 CITIES, DECEMBER, 1917, TO DECEMBER, 1929—Continued

City and date	Per cent of increase over December, 1917, in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
Minneapolis, Minn.—Continued.							
June, 1920.....	1.8	¹ 1.8	25.6	41.9	10.5	36.7	15.4
December, 1920.....	3.9	¹ 2.8	25.2	44.3	10.9	36.6	16.2
New Orleans, La.:							
December, 1918.....	16.6	36.8	(²)	19.7	23.8	15.9	17.9
June, 1919.....	17.4	48.8	.1	20.8	30.0	17.5	20.7
December, 1919.....	21.1	83.2	10.8	24.7	57.7	35.1	33.9
June, 1920.....	28.6	94.9	12.9	36.3	75.9	42.8	41.9
December, 1920.....	10.7	69.4	39.7	41.5	63.9	57.1	36.7
May, 1921.....	¹ 10.7	45.0	46.7	29.2	47.7	58.2	23.8
December, 1921.....	¹ 9.3	24.9	57.9	40.4	28.5	60.2	22.7
June, 1922.....	¹ 12.8	15.6	58.5	33.4	17.9	58.6	18.9
December, 1922.....	¹ 10.5	16.2	54.7	38.5	26.2	51.9	18.6
June, 1923.....	¹ 13.2	17.8	55.5	32.9	34.8	50.1	17.7
December, 1923.....	¹ 8.7	19.5	57.4	37.1	33.6	50.3	20.2
June, 1924.....	¹ 14.6	18.6	57.1	32.9	29.2	48.7	16.8
December, 1924.....	¹ 5.7	17.2	57.2	36.2	30.0	48.7	20.6
June, 1925.....	¹ 5.7	17.0	57.0	33.7	27.0	48.3	20.2
December, 1925.....	.9	15.9	56.8	34.2	27.5	47.9	22.7
June, 1926.....	¹ 5.2	15.7	57.0	39.6	26.6	46.7	20.1
December, 1926.....	¹ 1.6	15.6	56.2	43.8	25.0	47.4	21.7
June, 1927.....	¹ 3.9	13.4	56.0	38.5	21.8	48.6	20.3
December, 1927.....	¹ 4.9	13.4	56.2	38.5	21.8	48.5	19.9
June, 1928.....	¹ 6.8	13.1	55.9	34.5	17.9	46.1	18.2
December, 1928.....	¹ 3.2	13.1	54.8	28.4	17.9	46.8	19.5
June, 1929.....	¹ 4.3	12.6	53.6	³ 14.9	15.9	45.9	17.8
December, 1929.....	¹ 1.8	12.6	51.3	18.1	15.7	45.8	18.8
Pittsburgh, Pa.:							
December, 1918.....	18.8	35.9	7.6	9.2	26.3	16.3	19.8
June, 1919.....	16.2	45.3	13.5	9.4	34.1	16.7	21.8
December, 1919.....	25.1	82.8	15.5	9.8	63.1	28.3	36.2
June, 1920.....	36.5	91.3	34.9	31.7	77.4	41.2	49.1
December, 1920.....	14.3	75.4	35.0	64.4	78.1	46.3	39.3
May, 1921.....	¹ 8.8	50.7	55.5	59.8	58.2	48.6	27.7
December, 1921.....	¹ 5.6	23.6	55.3	66.2	31.6	48.0	22.8
June, 1922.....	¹ 12.2	17.3	56.7	66.0	20.1	43.4	17.8
December, 1922.....	¹ 5.4	13.1	56.7	72.8	25.1	42.8	20.1
June, 1923.....	¹ 5.4	14.8	60.4	68.4	29.4	44.1	21.3
December, 1923.....	¹ 2.1	14.9	60.7	76.9	29.0	43.1	22.9
June, 1924.....	¹ 7.5	13.7	71.8	74.8	29.0	45.3	22.4
December, 1924.....	¹ 2.4	11.2	72.1	92.2	29.8	46.6	24.9
June, 1925.....	¹ 2.2	11.1	75.2	91.2	27.7	46.7	26.0
December, 1925.....	6.2	10.5	75.2	89.9	28.0	46.8	28.5
June, 1926.....	2.6	7.8	75.4	88.0	25.3	46.1	26.2
December, 1926.....	5.6	5.5	75.0	91.9	24.3	46.4	27.2
June, 1927.....	2.2	5.2	74.7	88.8	22.6	46.3	25.4
December, 1927.....	1.4	3.8	74.4	88.0	21.9	46.2	24.8
June, 1928.....	¹ 3.8	4.2	72.8	85.6	15.9	46.9	22.3
December, 1928.....	2.1	3.5	71.6	86.0	16.4	46.9	24.4
June, 1929.....	.6	2.9	68.3	85.6	15.1	48.1	23.2
December, 1929.....	1.2	2.1	67.1	86.0	14.6	47.5	23.2
Richmond, Va.:							
December, 1918.....	20.5	33.8	1.0	11.8	26.3	9.0	17.9
June, 1919.....	20.6	42.3	3.6	11.4	28.6	13.5	20.6
December, 1919.....	23.1	78.6	9.8	18.7	55.9	24.0	32.0
June, 1920.....	36.1	93.6	12.5	36.1	75.4	32.4	43.8
December, 1920.....	11.9	69.0	25.9	62.2	70.0	36.0	33.3
May, 1921.....	¹ 7.4	43.8	20.4	47.1	48.8	38.7	20.2
December, 1921.....	¹ 2.9	21.2	34.1	46.8	33.0	38.4	18.3
June, 1922.....	¹ 7.8	12.9	34.5	33.4	27.6	34.7	13.2
December, 1922.....	¹ 6.3	10.6	35.3	54.2	29.4	33.5	14.4
June, 1923.....	¹ 7.2	12.5	35.7	52.7	40.0	33.9	14.9
December, 1923.....	¹ 4.8	12.9	39.4	61.2	40.5	35.4	17.1
June, 1924.....	¹ 11.3	11.9	39.5	49.1	37.8	35.8	13.5
December, 1924.....	¹ 3.3	8.9	41.3	47.9	38.5	35.7	16.5
June, 1925.....	¹ 2.4	8.6	41.4	44.2	38.2	36.0	16.7
December, 1925.....	4.8	8.4	40.4	53.6	39.2	39.1	20.8
June, 1926.....	1.6	8.1	39.6	51.0	38.1	40.8	19.7
December, 1926.....	.9	7.0	36.0	61.4	36.7	40.8	19.3
June, 1927.....	¹ 1.2	5.8	34.0	51.9	35.6	40.9	17.4
December, 1927.....	¹ 2.9	5.3	31.1	54.2	35.3	40.9	16.4
June, 1928.....	¹ 3.8	5.0	30.6	43.9	33.8	41.0	15.3
December, 1928.....	¹ 3.1	5.4	28.9	47.5	32.7	40.9	15.7
June, 1929.....	¹ 5.0	4.2	28.3	42.0	32.4	40.2	14.2
December, 1929.....	¹ 3.4	4.2	27.0	44.7	31.3	41.0	14.9

¹ Decrease.² The decrease is due primarily to the change in consumption and price accompanying the change from manufactured to natural gas.³ No change.

TABLE 6.—CHANGES IN COST OF LIVING IN 13 CITIES, DECEMBER, 1917, TO DECEMBER, 1929—Continued

City and date	Per cent of increase over December, 1917, in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnish-ing goods	Miscel-laneous	All items
St. Louis, Mo.:							
December, 1918.....	18.0	32.4	2.7	4.8	21.8	14.5	16.7
June, 1919.....	16.1	39.3	3.8	3.7	32.5	15.7	17.9
December, 1919.....	26.2	78.1	16.8	8.2	52.9	30.3	34.2
June, 1920.....	46.2	89.7	29.8	19.6	73.1	37.6	48.9
December, 1920.....	8.8	70.0	42.4	42.6	70.2	43.2	35.4
May, 1921.....	¹ 10.1	43.8	52.5	30.9	43.5	42.1	23.1
December, 1921.....	¹ 11.6	17.2	63.8	33.4	19.2	40.6	18.5
June, 1922.....	¹ 12.1	7.9	65.7	32.3	12.8	33.2	15.1
December, 1922.....	¹ 9.5	6.3	68.0	48.9	14.9	33.4	17.0
June, 1923.....	¹ 11.5	9.0	74.6	30.8	29.8	33.4	17.7
December, 1923.....	¹ 7.5	9.6	79.5	32.1	30.5	35.8	20.6
June, 1924.....	¹ 11.4	8.6	83.4	21.6	26.2	35.7	18.8
December, 1924.....	¹ 6.5	7.9	83.4	24.6	27.4	35.8	20.7
June, 1925.....	¹ 2.5	7.4	85.2	19.5	28.0	36.6	22.4
December, 1925.....	3.4	6.9	85.4	26.9	27.9	37.0	25.0
June, 1926.....	2.8	6.8	84.7	18.3	27.1	36.6	24.1
December, 1926.....	2.0	7.0	83.2	38.9	22.7	36.6	24.5
June, 1927.....	1.2	4.4	81.0	34.0	22.3	36.5	23.2
December, 1927.....	¹ 2.3	3.4	78.3	34.3	23.3	36.9	21.4
June, 1928.....	¹ 3.5	3.1	76.3	18.9	21.6	37.2	19.9
December, 1928.....	¹ 2.2	2.5	74.2	23.1	19.5	38.7	20.4
June, 1929.....	¹ 1.4	1.7	71.8	22.5	17.8	38.4	20.5
December, 1929.....	¹ 1.5	.8	69.2	33.4	16.2	44.2	21.7
Scranton, Pa.:							
December, 1918.....	21.3	34.4	.5	24.7	27.0	21.4	21.9
June, 1919.....	18.1	49.6	6.2	25.7	35.6	24.9	25.0
December, 1919.....	26.9	82.1	2.4	31.5	48.9	34.7	37.1
June, 1920.....	41.4	97.7	17.2	43.5	62.8	47.9	51.5
December, 1920.....	17.8	76.5	18.5	67.3	62.0	50.4	39.1
May, 1921.....	¹ 4.0	54.3	41.5	62.8	48.6	54.6	28.2
December, 1921.....	4.1	29.1	44.6	67.1	30.7	52.4	26.3
June, 1922.....	¹ 6.7	24.2	52.8	68.0	24.2	49.9	20.9
December, 1922.....	¹ 2.1	20.7	53.6	68.6	28.5	49.3	22.4
June, 1923.....	¹ 5.1	21.7	59.0	65.2	34.7	51.4	22.4
December, 1923.....	.2	23.2	60.8	75.3	34.9	51.7	25.8
June, 1924.....	¹ 8.7	22.2	67.6	68.9	31.6	53.7	22.4
December, 1924.....	¹ 1.6	21.1	68.6	75.7	34.6	53.7	25.8
June, 1925.....	1.4	20.3	71.0	70.3	33.9	54.8	27.0
December, 1925.....	9.6	20.2	70.5	99.8	33.9	55.4	32.0
June, 1926.....	4.7	19.5	71.4	77.8	34.4	55.9	29.0
December, 1926.....	6.7	18.3	72.4	78.5	33.7	55.9	29.8
June, 1927.....	4.2	17.2	73.1	71.4	32.4	55.7	28.2
December, 1927.....	5.0	16.3	73.4	75.3	32.1	55.9	28.5
June, 1928.....	2.4	16.2	71.7	69.0	30.1	56.2	26.9
December, 1928.....	4.3	15.3	71.7	72.2	29.3	57.8	27.8
June, 1929.....	2.9	15.2	68.1	65.0	26.5	57.5	26.3
December, 1929.....	6.5	13.7	63.9	67.6	26.0	57.3	27.3

¹ Decrease.

Cost of Living in the United States and in Foreign Countries ¹

THE trend of cost of living in the United States and in various foreign countries since 1913 is shown by the index numbers in the following tables. Table 1 contains general cost of living index numbers, while Tables 2, 3, 4, and 5 show changes in the cost of food, clothing, fuel and light, and rent, respectively.

Caution should be observed in the use of these figures, since not only are there differences in the base periods and in the number and kind of articles included, and the number of markets represented, but also there are radical differences of method in the construction of the index numbers. The number of countries included in the five tables varies according to the information available. Several countries publish an index number for food only, while others omit clothing and in some instances also rent.

¹ Preceding articles on this subject appeared in the Labor Review for December, 1922, July, 1923, January and July, 1924, January and July, 1925, January, 1926, February, 1927, August, 1928, February, 1929, and August, 1929.

TABLE 1.—INDEX NUMBERS OF COST OF LIVING IN THE UNITED STATES AND IN FOREIGN COUNTRIES, 1913 TO DECEMBER, 1929

Country..	United States	Canada	Belgium	Czechoslovakia	Denmark	Finland	France	Germany	Ireland	Italy
Number of localities..	32	60	50	Prague	200	21	Paris	71	200	Milan
Commodities included..	Food, clothing, fuel and light, rent, house furnishings, etc.	Food, clothing, fuel and light, rent, sundries	Food, clothing, fuel and light, rent, sundries	Food, clothing, fuel and light, rent, sundries	Food, clothing, fuel and light, rent, taxes, etc.	Food, clothing, fuel, rent, taxes, etc.	Food, clothing, fuel and light, rent, sundries	Food, clothing, fuel and light, rent, sundries	Food, clothing, fuel and light, rent, sundries	Food, clothing, fuel and light, rent, sundries
Computing agency.....	Bureau of Labor Statistics	Department of Labor	Ministry of Labor and Industry	Office of Statistics	Department of Statistics	Central Statistical Office	Commission for Study of Cost of Living	Federal Statistical Bureau	Department of Industry and Commerce	Municipal Administration
Base period.....	1913	1913	1921	July, 1914	July, 1914	January-June, 1914	January-June, 1914	1913-14	July, 1914	January-June, 1914
1913.....	100	100								
1914.....	¹ 103	¹ 103		¹ 100	¹ 100	¹ 100	¹ 100	¹ 100	¹ 100	¹ 100
1915.....	¹ 105	¹ 107			¹ 116					114
1916.....	¹ 118	¹ 124			¹ 136					146
1917.....	¹ 142	¹ 143			¹ 155					197
1918.....	¹ 174	¹ 162			¹ 182					285
1919.....	¹ 199	¹ 176			¹ 211		¹ 238			327
1920.....	¹ 200	¹ 190			¹ 262		¹ 341			442
1921.....	¹ 174	¹ 181	100		¹ 237	¹ 1172	¹ 307			541
1922.....	¹ 170	¹ 157	¹ 90		¹ 199	¹ 1157	¹ 302		¹ 185	501
1923.....	¹ 173	¹ 159	¹ 109	690	¹ 204	1147	¹ 334	¹ 142	¹ 180	494
1924.....			¹ 125	692	¹ 214	1170			¹ 183	527
Dec.....	173	156	137	707		1217	¹ 377	135		573
1925.....			¹ 133	721	¹ 219	1212			¹ 188	611
Dec.....	178	160	143	703		1197	¹ 421	141		649
1926.....			¹ 174	710	¹ 184	1183				654
Dec.....	176	157	199	735		1197	¹ 545	144	¹ 182	657
1927.....				739		1207				
Jan.....		158	202	741	181	1187	¹ 524	145	182	655
Apr.....	¹ 173	155	199	740	178	1173	¹ 525	146	171	651
July.....		155	204	747	176	1203	¹ 507	150	171	548
Oct.....	¹ 172	156	207	727	176	1237	¹ 498	150	175	536
1928.....										
Jan.....		157	209	734	176	1216		151	177	532
Feb.....		156	206	732		1206		151		533
Mar.....		156	203	730		1214	¹ 507	151		531
Apr.....		156	204	734	176	1212		151	170	531
May.....		155	202	736		1207		151		526
June.....	170	155	204	734		1219	¹ 519	151		530
July.....		155	205	746	176	1236		153	173	526
Aug.....		157	206	754		1258		154		522
Sept.....		157	209	749		1249	¹ 519	152		526
Oct.....		158	212	726	172	1254		152	176	528
Nov.....		158	217	721		1262		152		534
Dec.....	171	158	216	725		1260	¹ 531	153		538
1929.....										
Jan.....		158	216	727	173	1242		153	177	541
Feb.....		157	217	730		1232		154		544
Mar.....		157	216	736		1229	¹ 547	157		561
Apr.....		156	214	728	174	1219		154	173	551
May.....		156	214	726		1210		154		542
June.....	170	156	213	726		1215	¹ 556	153		544
July.....		156	216	743	173	1223		154	174	542
Aug.....		159	221	733		1232		154		537
Sept.....		159	225	717		1230	¹ 556	154		540
Oct.....		159	229	716	172	1236		154	179	545
Nov.....				718		1228		153		
Dec.....	171									

¹ December.² July.³ January-June.⁴ October, 1913; January, April, and June, 1914.⁵ April-June.⁶ Quarter ending with month.⁷ June.⁸ Quarter beginning with month.

TABLE 1.—INDEX NUMBERS OF COST OF LIVING IN THE UNITED STATES AND IN FOREIGN COUNTRIES, 1913 TO DECEMBER, 1929—Continued

Country..	Nether-lands	Norway	Poland	Sweden	Swit-zerland	United King-dom	South Africa	India	Austra-lia	New Zealand
Number of localities..	The Hague	30	Warsaw	49	33	630	9	Bombay	30	25
Commodities included..	All com-modities	Food, clothing, fuel, light, rent, sundries	Food, clothing, fuel, light, rent, sundries	Food, clothing, fuel, light, rent, sundries	Food, clothing, fuel, light, rent	Food, clothing, fuel, light, rent, sundries	Food, fuel, light, rent, sundries	Food, clothing, fuel, light, rent	Food, groceries, rent	Food, clothing, fuel, light, rent, sundries
Computing agency..	Municipal Administration	Central Statistical Office	Central Statistical Office	Board of Social Welfare	Federal Labor Office	Ministry of Labor	Office of Census and Statistics	Labor Office	Bureau of Census and Statistics	Census and Statistics Office
Base period..	1921	July, 1914	January, 1914	July, 1914	June, 1914	July, 1914	1914	July, 1914	1911	July, 1914
1913.									108	
1914.		⁷ 100	100	² 100	² 100	² 100	100	² 100	111	² 100
1915.		⁷ 117				² 125	105		126	107
1916.		⁷ 146		¹ 139		² 148	112		130	116
1917.		⁷ 190		⁹ 166		² 180	122		129	129
1918.		⁷ 253		² 219	204	² 203	131	154	134	143
1919.		⁷ 275		² 257	222	² 208	145	175	148	157
1920.		⁷ 302		² 270	224	² 252	179	183	175	178
1921.	100	⁷ 302		² 236	200	² 219	162	173	167	177
1922.	¹ 83	⁷ 255		² 190	164	² 184	135	164	156	160
1923.	¹ 82	⁷ 239		² 174	164	² 160	131	154	168	158
1924.				² 171	169	² 170	133	157	166	160
Dec.	84	267				181	133	160	⁶ 165	
1925.				² 176	168	² 173	133	155	170	162
Dec.	82	236			167	177	131	155	⁶ 172	164
1926.				² 172	162	² 170			176	163
Dec.	80	216	115		161	179	129	156	⁶ 174	163
1927.					160				174	162
Jan.		213	117	171	160	175	130	156		
Feb.		211	117		160	172	130	155		162
Mar.	80	208	116		159	171	131	155	⁶ 174	
Apr.		206	118	170	158	165	131	153		
May.		205	119		160	164	132	152		162
June.	80	204	119		160	163	132	154	⁶ 172	
July.		206	115	169	160	166	132	156		
Aug.		205	116		160	164	131	157		161
Sept.	80	199	117		161	165	131	154	⁶ 175	
Oct.		199	119	172	161	167	132	151		
Nov.		198	122		162	169	132	150		161
Dec.	82	197	121		162	169	132	151	⁶ 177	
1928.										
Jan.		197	120	171	161	168	132	154		
Feb.		197	118		161	166	131	148		161
Mar.	83	196	119		160	164	132	145	⁶ 175	
Apr.		196	121	171	160	164	133	144		
May.		196	121		160	164	133	147		162
June.	82	196	122		161	165	132	146	⁶ 175	
July.		196	123	173	161	165	131	147		
Aug.		195	122		161	165	131	146		161
Sept.	81	187	122		161	165	131	145	⁶ 173	
Oct.		186	123	172	162	166	131	146		
Nov.		185	125		162	167	131	147		162
Dec.	80	184	125		162	168	131	148	⁶ 173	
1929.										
Jan.		183	125	170	161	167	131	149		
Feb.		183	128		161	165	131	149		161
Mar.	81	182	125		161	166	132	149	⁶ 180	
Apr.		181	125	171	159	162	132	148		
May.		181	125		160	161	132	147		161
June.	79	181	123		161	160	132	147		
July.		182	123	169	161	161	131	148		
Aug.		184	123		162	163	131	149		161
Sept.	80		123		163	164	131	149		
Oct.		182	124	170	163	165	130	149		
Nov.		182	125		162	167		150		
Dec.		182				167		150		

¹ December.² July.⁶ Quarter ending with month.⁷ June.⁹ September.

TABLE 2.—INDEX NUMBERS OF COST OF FOOD IN THE UNITED STATES AND IN FOREIGN COUNTRIES, 1913 TO DECEMBER, 1929

Country..	United States	Canada	Belgium	Czecho-slovakia	Denmark	Finland	France	Germany	Ireland	Italy
Number of localities..	51	60	59	Prague	200	21	Paris	71	200	Milan
Computing agency.....	Bureau of Labor Statistics	Department of Labor	Ministry of Labor and Industry	Office of Statistics	Department of Statistics	Central Statistical Office	Commission for Study of Cost of Living	Federal Statistical Bureau	Department of Industry and Commerce	Municipal Administration
Base period.....	1913	1913	1921	July, 1914	July, 1914	January-June, 1914	January-June, 1914	1913-14	July, 1914	January-June, 1914
1913.....	100	100								
1914.....	¹ 105	¹ 108		² 100	² 100	³ 100	³ 100	⁴ 100	² 100	³ 100
1915.....	¹ 105	¹ 111								³ 116
1916.....	¹ 126	¹ 138								³ 149
1917.....	¹ 157	¹ 167								³ 205
1918.....	¹ 187	¹ 186								³ 320
1919.....	¹ 197	¹ 201					³ 260			³ 359
1920.....	¹ 178	¹ 202					³ 344			³ 455
1921.....	¹ 150	¹ 150	100			¹ 1230	³ 323			³ 559
1922.....	¹ 147	¹ 142	² 87		² 184	¹ 1122	³ 316		² 185	³ 522
1923.....	¹ 150	¹ 146	² 105	769	² 188	1079	³ 346	¹ 166	² 182	³ 500
1924.....	146	144	² 124	787		1003			² 185	³ 528
Dec.....	152	144	140	810		1160	³ 389	146		³ 579
1925.....	157		² 134	827	² 210	1147			² 188	³ 622
Dec.....	166	157	147	796		1138	³ 437	146		³ 660
1926.....	161		² 185		² 159	1108			² 174	³ 655
Dec.....	162	152	208	840		1110	³ 574	150		³ 631
1927.....	155					1115				
Jan.....	159	155	208	849	156	1092		151	178	³ 625
Feb.....	156	153	212	848		1095		152		³ 642
Mar.....	154	151	205	844		1086	³ 554	151		³ 635
Apr.....	154	147	204	853	152	1069		150	165	³ 617
May.....	155	147	201	865		1058		151		³ 565
June.....	159	148	207	878		1072	³ 550	153		³ 541
July.....	153	149	210	863	153	1102		157	166	³ 524
Aug.....	152	149	204	849		1159		150		³ 518
Sept.....	154	148	207	840		1146	³ 525	151		³ 509
Oct.....	156	150	210	834	152	1156		152	172	³ 509
Nov.....	157	151	211	836		1175		152		³ 510
Dec.....	156	152	211	844		1171	³ 504	153		³ 513
1928.....										
Jan.....	155	152	210	845	152	1126		152	175	³ 514
Feb.....	152	150	207	842		1112		151		³ 518
Mar.....	151	149	201	838		1123	³ 521	151		³ 516
Apr.....	152	148	202	844	152	1119		151	162	³ 516
May.....	154	147	199	847		1113		151		³ 513
June.....	153	146	203	843		1126	³ 544	152		³ 529
July.....	153	147	204	858	153	1155		154	166	³ 513
Aug.....	154	151	206	871		1191		156		³ 506
Sept.....	158	152	208	861		1174	³ 536	153		³ 513
Oct.....	157	154	213	821	146	1183		152	171	³ 515
Nov.....	157	154	219	813		1194		152		³ 527
Dec.....	156	154	218	820		1186	³ 555	153		³ 533
1929.....										
Jan.....	155	154	217	815	147	1156		153	173	³ 539
Feb.....	154	152	217	821		1141		156		³ 541
Mar.....	153	153	215	830		1135	³ 578	159		³ 570
Apr.....	152	150	212	815	150	1118		154	164	³ 553
May.....	153	149	210	812		1104		154		³ 537
June.....	155	149	208	817		1103	³ 500	154		³ 541
July.....	158	150	212	843	149	1116		156	166	³ 538
Aug.....	160	158	220	825		1131		155		³ 528
Sept.....	161	159	225	796		1128		154		³ 534
Oct.....	160	159	229	791	146	1137		154		³ 541
Nov.....	160	160						153		
Dec.....	158									

¹ December.² July.³ January-June.⁴ October, 1913; January, April, and June, 1914.⁵ April-June.⁶ Quarter ending with month.

TABLE 2.—INDEX NUMBERS OF **COST OF FOOD** IN THE UNITED STATES AND IN FOREIGN COUNTRIES, 1913 TO DECEMBER, 1929—Continued

Country	Nether-lands	Nor-way	Poland	Sweden	Swit-zerland	United King-dom	South Africa	India	Austra-lia	New Zea-land
Number of localities	The Hague	30	War-saw	49	33	630	9	Bom-bay	30	25
Comput-ing agen-cy	Municipal Ad-minis-tration	Central Statist-ical Office	Central Statist-ical Office	Board of Social Welfare	Federal Labor Office	Minis-try of Labor	Office of Census and Statis-tics	Labor Office	Bureau of Census and Statis-tics	Census and Statis-tics Office
Base pe-riod	1921	July, 1914	Janu-ary, 1914	July, 1914	June, 1914	July, 1914	1914	July, 1914	July, 1914	July, 1914
1914		⁷ 100	100	² 100	² 100	² 100	100	² 100	² 100	² 100
1915		⁷ 123					107		² 131	112
1916		⁷ 153		¹ 152			111		² 130	119
1917		⁷ 203					124		² 126	128
1918		⁷ 271		² 258			125		² 131	139
1919		⁷ 290		² 318			136		² 147	146
1920		⁷ 319		² 287			178		² 164	168
1921	100	⁷ 295		² 231	213	² 220	⁶ 128	² 174	² 161	164
1922	¹ 76	⁷ 231		² 178	163	² 180	¹ 118	² 160	² 148	142
1923	¹ 78	⁷ 217		² 158	165	² 162	¹ 118	² 148	² 164	143
1924				² 155	172	² 162			² 148	148
Dec	82	274			175	180	121	156	148	150
1925				² 168	169	² 167			² 156	151
Dec	79	221	125		167	174	116	151	155	154
1926				² 156	160	² 161			² 159	150
Dec	76	184	142		159	169	117	154	158	149
1927					158					145
Jan		180	143	155	158	167	116	155	158	148
Feb		177	144		157	164	117	152	153	146
Mar	76	173	141		156	162	118	152	151	146
Apr		169	142	149	156	155	119	151	151	145
May		169	145		156	154	121	150	152	145
June	77	172	146		157	154	120	151	153	145
July		175	143	148	157	159	119	154	152	144
Aug		175	143		157	156	118	155	155	144
Sept	77	174	143		159	157	117	151	157	143
Oct		173	144	154	159	161	119	148	159	143
Nov		171	149		161	163	119	147	157	144
Dec	80	171	147		160	163	119	149	155	146
1928										
Jan		170	143	152	159	162	119	151	154	147
Feb		170	138		158	159	118	146	152	145
Mar	82	171	140		157	155	118	142	153	145
Apr		171	142	152	156	155	119	140	154	144
May		172	142		156	154	120	144	154	146
June	79	171	143		156	156	118	142	154	147
July		173	144	156	157	157	116	143	152	147
Aug		170	143		156	156	115	142	150	146
Sept	76	164	142		157	156	115	141	150	147
Oct		163	144	154	158	157	115	142	150	149
Nov		161	148		158	159	115	144	150	150
Dec	76	161	147		158	160	115	145	152	152
1929										
Jan		158	146	150	157	159	115	146	161	149
Feb		157	153		157	156	115	146	161	148
Mar	76	158	146		156	157	117	146	160	146
Apr		156	144	151	154	150	118	145	162	147
May		156	144		154	149	119	143	160	148
June	72	156	139		155	147	118	144	161	147
July		157	139	148	155	149	116	145	160	146
Aug		161	137		156	153	115	146	161	147
Sept	75	160	137		158	154	114	146	162	147
Oct		160	139	150	158	156	113	147	165	
Nov		159	141		157	159		147	167	
Dec						159		148		

¹ December.² July.⁶ Quarter ending with month.⁷ June.

TABLE 3.—INDEX NUMBERS OF COST OF CLOTHING IN THE UNITED STATES AND IN FOREIGN COUNTRIES, 1913 TO DECEMBER, 1929

Country...	United States	Canada	Belgium	Czechoslovakia	Denmark	Finland	France	Germany	Italy
Number of localities.	32	60	59	Prague	100+	21	Paris	71	Milan
Computing agency...	Bureau of Labor Statistics	Department of Labor	Ministry of Labor and Industry	Office of Statistics	Department of Statistics	Central Statistical Office	Commission for Study of Cost of Living	Federal Statistical Bureau	Municipal Administration
Base period....	1913	1913	1921	July, 1914	July, 1914	January-June, 1914	January-June, 1914	1913-14	January-June, 1914
1913.....	100	100							
1914.....	¹ 101	¹ 103		² 100	² 100	² 100	² 100	⁴ 100	² 100
1915.....	¹ 105	¹ 115			² 110				
1916.....	¹ 120	¹ 136			² 160				
1917.....	¹ 149	¹ 158			² 190				
1918.....	¹ 205	¹ 185			² 200				² 284
1919.....	¹ 269	¹ 210			² 310		² 296		² 221
1920.....	¹ 250	¹ 232			² 355		² 485		² 692
1921.....	¹ 184	¹ 177	100		² 248	¹ 1107	² 353		² 512
1922.....	¹ 172	¹ 162	² 99		² 217	¹ 1090	² 315		610
1923.....	¹ 176	¹ 164	² 113	963	² 239	1065	² 365	¹ 194	615
1924.....			² 133	964	² 267	1039			611
Dec.....	171	159	140	1006		1046	² 440	173	667
1925.....			² 142	996	² 272	1043			655
Dec.....	169	159	144	995		1043	² 510	173	702
1926.....			² 166	988	² 210	1042			699
Dec.....	167	157	199	982		1035	² 616	158	709
1927.....				987		1036			
Jan.....		157	203	975	196	1035		157	705
Feb.....		157	207	975		1035		156	705
Mar.....		157	210	975		1035	² 565	156	705
Apr.....		154	212	975	193	1035		156	705
May.....		154	213	975		1035		156	643
June.....	165	154	215	975		1035	² 565	156	616
July.....		154	217	975	192	1035		156	619
Aug.....		154	219	975		1036		158	597
Sept.....		155	223	1002		1036	² 563	160	697
Oct.....		155	230	1013	196	1037		162	597
Nov.....		155	232	1013		1038		164	596
Dec.....	163	155	234	1013		1038	² 581	166	591
1928.....									
Jan.....		155	236	1013	196	1039		167	591
Feb.....		155	237	1013		1040		168	591
Mar.....		155	240	1020		1043	² 581	169	591
Apr.....		157	241	1020	198	1043		170	591
May.....		157	240	1020		1044		170	596
June.....	163	157	242	1033		1048	² 581	170	559
July.....		157	244	1040	198	1048		171	561
Aug.....		157	243	1040		1049		171	561
Sept.....		157	246	1032		1052	² 591	171	561
Oct.....		157	247	1026	198	1052		172	558
Nov.....		157	248	1023		1054		172	555
Dec.....	162	157	250	1023		1055	² 591	173	555
1929.....									
Jan.....		157	251	1022	198	1055		173	555
Feb.....		157	252	1018		1055		173	555
Mar.....		157	253	1018		1055	² 594	173	555
Apr.....		157	254	1025	196	1056		173	555
May.....		157	255	1025		1056		173	556
June.....	161	157	256	998		1055	² 604	172	555
July.....		157	256	998	196	1055		172	555
Aug.....		157	258	998		1055		172	555
Sept.....		157	259	1006		1055		171	555
Oct.....		157	261	1006	195	1055		171	555
Nov.....		167						171	
Dec.....	160								

¹ December.² July.³ January-June.⁴ October, 1913; January, April, and June, 1914.⁵ April-June.⁶ Quarter ending with month.

TABLE 3.—INDEX NUMBERS OF COST OF CLOTHING IN THE UNITED STATES AND IN FOREIGN COUNTRIES, 1913 TO DECEMBER, 1929—Continued

Country.....	Norway	Poland	Sweden	Switzer-land	United King- dom	India	Australia	New Zealand
Number of localities...	30	Warsaw	49	33	100	Bombay	6	4
Computing agency...	Central Statistical Office	Central Statistical Office	Board of Social Welfare	Federal Labor Office	Ministry of Labor	Labor Office	Bureau of Census and Statistics	Census and Statistics Office
Base period.....	July, 1914	January, 1914	July, 1914	June, 1914	July, 1914	July, 1914	November, 1914	July, 1914
1914.....	⁷ 100	¹⁰⁰	² 100	² 100	² 100	² 100	⁸ 100	² 100
1915.....					² 125		⁸ 105	109
1916.....			¹ 160		² 155		⁸ 117	127
1917.....			⁹ 210		² 200		⁸ 132	156
1918.....	⁷ 312		² 285		² 310		⁸ 145	179
1919.....	⁷ 388		² 310		² 360		⁸ 164	216
1920.....	⁷ 336		² 390		² 430		⁸ 181	245
1921.....	⁷ 292		² 270	232	² 290	² 263	⁸ 165	226
1922.....	⁷ 247		² 210	186	239	247	⁸ 140	188
1923.....	⁷ 230		² 196	176	222	214	⁸ 136	176
1924.....	⁷ 246		² 192	179	226	226		168
December.....	⁶ 257			181		214		
1925.....			² 191	181		² 192		164
December.....	⁶ 225	154		179	225	176		
1926.....			² 187	172		² 160		155
December.....	⁶ 191	148		166	218	148		
1927.....				162				149
January.....		148	182	166	215	143		
February.....		146		166	215	148		152
March.....	⁶ 176	152		166	215	152		
April.....		152	181	161	215	143		
May.....		152		161	215	147		149
June.....	⁶ 173	152		161	213	147		
July.....		152	180	161	213	149		
August.....		159		161	213	152		147
September.....	⁶ 172	165		161	213	163		
October.....		169	181	162	215	163		
November.....		169		162	215	157		147
December.....	⁶ 172	169		162	215	154		
1928.....								
January.....		169	182	162	215	152		
February.....		169		162	215	153		145
March.....	⁶ 169	169		162	218	151		
April.....		169	184	166	218	153		
May.....		169		166	220	155		146
June.....	⁶ 169	169		166	220	156		
July.....		169	185	166	220	158		
August.....		169		166	220	159		145
September.....	⁶ 168	169		166	220	157		
October.....		169	186	169	220	156		
November.....		169		169	220	158		144
December.....	⁶ 166	169		169	220	160		
1929.....								
January.....		169	186	169	220	160		
February.....		169		169	220	160		144
March.....	⁶ 164	169		169	220	159		
April.....		169	185	167	220	160		
May.....		169		167	218	160		144
June.....	⁶ 164	169		167	218	159		
July.....		169	184	167	218	160		
August.....		169		167	218	160		143
September.....	⁶ 163	169		167	218	159		
October.....		169	183	165	215	158		
November.....		169		165	215	154		
December.....					215			

¹ December.² July.⁶ Quarter ending with month.⁷ June.⁸ November.⁹ September.

TABLE 4.—INDEX NUMBERS OF COST OF FUEL AND LIGHT IN THE UNITED STATES AND IN FOREIGN COUNTRIES, 1913 TO DECEMBER, 1929

Country.....	United States	Canada	Belgium	Czechoslovakia	Denmark	Finland	France	Germany
Number of localities..	32	60	50	Prague	100+	21	Paris	71
Computing agency....	Bureau of Labor Statistics	Department of Labor	Ministry of Labor and Industry	Office of Statistics	Department of statistics	Central Statistical Office	Commission for Study of Cost of Living	Federal Statistical Bureau
Base period.....	1913	1913	1921	July, 1914	July, 1914	January-June, 1914	1914	1913-14
1913.....	100	100						
1914.....	¹ 101	¹ 98		² 100	² 100	² 100	100	² 100
1915.....	¹ 101	¹ 96			² 130			
1916.....	¹ 108	¹ 109			² 175			
1917.....	¹ 124	¹ 125			² 220			
1918.....	¹ 148	¹ 146			² 275			
1919.....	¹ 157	¹ 148			² 292		² 164	
1920.....	¹ 195	¹ 200			² 563		² 296	
1921.....	¹ 181	¹ 172	100		² 401	¹ 1249	² 308	
1922.....	¹ 186	¹ 177	² 92		² 301	¹ 1340	² 287	
1923.....	¹ 184	¹ 172	² 120	1,041	² 282	1477	² 317	¹ 177
1924.....			² 127	881	² 298	1473		
December.....	181	162	127	837		1439	² 368	137
1925.....			² 113	829	² 252	1362		
December.....	187	166	114	807		1288	² 402	142
1926.....			² 144		² 215	1271		
December.....	188	162	206	814		1389	² 577	144
1927.....						1405		
January.....		161	204	814	230	1404		145
February.....		161	197	814		1406		145
March.....		161	189	814		1408	² 570	145
April.....		160	184	814	212	1409		143
May.....		160	181	820		1405		141
June.....	181	158	185	820		1388	² 530	140
July.....		158	186	820	201	1386		142
August.....		158	184	814		1371		143
September.....		158	184	814		1392	² 543	145
October.....		158	182	814	194	1403		146
November.....		158	181	819		1439		146
December.....	183	158	177	819		1449	² 555	146
1928.....								
January.....		159	176	819	190	1440		146
February.....		159	170	819		1430		146
March.....		159	168	819		1438	² 547	146
April.....		159	168	819	190	1436		145
May.....		158	168	819		1434		144
June.....	177	158	170	819		1436	² 504	144
July.....		157	168	819	185	1424		144
August.....		157	169	819		1421		145
September.....		157	170	842		1429	² 510	147
October.....		157	172	842	183	1426		150
November.....		157	174	842		1442		151
December.....	181	157	175	842		1452	² 515	151
1929.....								
January.....		158	175	842	185	1450		151
February.....		158	175	842		1446		152
March.....		158	184	842		1456	² 535	153
April.....		158	187	842	190	1463		151
May.....		157	189	842		1460		149
June.....	175	157	194	842		1456	² 539	149
July.....		157	198	842	185	1451		149
August.....		156	204	842		1446		150
September.....		156	206	842		1450		151
October.....		157		854	185	1458		153
November.....		157						153
December.....	179							

¹ December.² July.³ January-June.⁴ October, 1913; January, April, and June, 1914.⁵ April-June.⁶ Quarter ending with month.

TABLE 4.—INDEX NUMBERS OF COST OF FUEL AND LIGHT IN THE UNITED STATES AND IN FOREIGN COUNTRIES, 1913 TO DECEMBER, 1929—Continued

Country.....	Italy	Norway	Poland	Sweden	Switzer- land	United King- dom	India	New Zealand
Number of localities..	Milan	30	Warsaw	49	33	26-30	Bombay	4
Computing agency....	Munic- ipal Ad- minis- tration	Central Statist- tical Office	Central Statist- tical Office	Board of Social Welfare	Federal Labor Office	Minis- try of Labor	Labor Office	Census and Statistics Office
Base period.....	January- June, 1914	July, 1914	1914	July, 1914	June, 1914	July, 1914	July, 1914	July, 1914
1914.....	² 100	⁷ 100	100	² 100	² 100	² 100	² 100	² 100
1915.....								101
1916.....				¹ 168				110
1917.....				⁹ 240				126
1918.....	¹ 220			² 286				136
1919.....	² 220			² 326				149
1920.....	² 611			² 372		² 230		178
1921.....	² 899			² 264	213	² 260	² 176	199
1922.....	524	301		² 188	181	202	168	183
1923.....	529	282		² 185	173	183	163	175
1924.....	519			² 182	165	² 183		174
December.....	515	307			161	185	167	
1925.....	520			² 177	153	² 180		174
December.....	533	232	106		150	180	165	
1926.....	523			² 168	146	² 195		177
December.....	565	279	108		146	250	166	
1927.....					142			177
January.....	627	234	111	186	146	215	166	
February.....	661	224	110		144	210	166	177
March.....	661	217	108		144	200	166	
April.....	661	210	108	180	143	190	166	
May.....	661	203	108		142	185	166	177
June.....	548	198	106		142	175	166	
July.....	548	193	107	176	141	170	166	
August.....	548	189	106		141	170	166	177
September.....	548	183	108		141	170	166	
October.....	530	180	111	171	141	170	156	
November.....	522	179	112		141	170	156	179
December.....	422	177	113		141	170	156	
1928:								
January.....	420	177	113	168	139	170	156	
February.....	409	177	113		139	170	144	179
March.....	407	176	115		139	170	144	
April.....	407	174	116	166	138	168	145	
May.....	407	172	120		137	170	145	179
June.....	407	171	124		136	168	158	
July.....	407	169	121	164	136	165	158	
August.....	407	169	121		135	165	158	179
September.....	407	166	123		135	168	151	
October.....	407	163	130	162	135	170	144	
November.....	408	164	135		136	170	143	178
December.....	408	163	137		136	170	143	
1929:								
January.....	408	162	139	159	135	170	148	
February.....	425	164	141		135	173	143	175
March.....	425	166	140		135	173	143	
April.....	425	165	141	165	134	173	143	
May.....	425	162	141		134	170	143	175
June.....	425	162	141		134	170	143	
July.....	427	162	142	161	134	170	143	
August.....	427	163	142		134	170	143	175
September.....	434	162	143		134	170	143	
October.....	438	161	144	160	135	173	143	
November.....		161	149		135	175	143	
December.....						175		

¹ December.² July.³ January-June.⁴ June.⁵ September.

TABLE 5.—INDEX NUMBERS OF COST OF RENT IN THE UNITED STATES AND IN FOREIGN COUNTRIES, 1913 TO DECEMBER, 1929

Country...	United States	Canada	Belgium	Czechoslovakia	Denmark	Finland	France	Germany	Italy
Number of localities.	32	60	59	Prague	100+	21	Paris	71	Milan
Computing agency.....	Bureau of Labor Statistics	Department of Labor	Ministry of Labor and Industry	Office of Statistics	Department of Statistics	Central Statistical Office	Commission for Study of Cost of Living	Federal Statistical Bureau	Municipal Administration
Base period....	1913	1913	1921	July, 1914	July, 1914	January-June, 1914	1914	1913-14	January-June, 1914
1913.....	100	100							
1914.....	¹ 100	¹ 97		² 100	² 100	² 100	100	⁴ 100	⁴ 100
1915.....	¹ 102	¹ 94			² 100				
1916.....	¹ 102	¹ 95			² 102				
1917.....	¹ 100	¹ 102			² 105				
1918.....	¹ 109	¹ 111			² 108				² 100
1919.....	¹ 125	¹ 122			² 113		³ 100		² 100
1920.....	¹ 151	¹ 142			² 130		³ 100		² 108
1921.....	¹ 161	¹ 150	100		² 141	¹ 603	³ 110		² 139
1922.....	¹ 162	¹ 155	² 99		² 155	¹ 795	³ 160		202
1923.....	¹ 167	¹ 158	² 134	206	² 160	901	³ 200	¹ 22	234
1924.....			² 140	213	² 170	1088			328
Dec.....	168	158	140	222		1165	⁶ 200	60	393
1925.....			² 152	236	² 178	1224			414
Dec.....	167	158	152	244		1266	⁶ 220	89	477
1926.....			² 158		² 185	1306			517
Dec.....	164	156	167	256		1334	⁶ 250	105	638
1927.....						1379			
Jan.....		156	180	261	185	1334		105	638
Feb.....		156	181	261		1334		105	638
Mar.....		156	182	261		1334	⁶ 250	105	638
Apr.....		156	182	261	189	1334		115	638
May.....		156	182	261		1334		115	638
June.....	162	156	183	261		1411	⁶ 260	115	638
July.....		156	183	261	189	1411		115	400
Aug.....		156	183	261		1411		115	400
Sept.....		156	183	261		1411	⁶ 275	115	400
Oct.....		156	184	261	189	1411		125	400
Nov.....		156	184	261		1411		125	400
Dec.....	160	156	184	261		1411	⁶ 275	125	400
1928.....									
Jan.....		156	208	261	189	1411		126	400
Feb.....		156	209	261		1411		126	400
Mar.....		156	209	261		1411	⁶ 275	126	400
Apr.....		156	209	261	193	1411		126	400
May.....		157	209	261		1411		126	400
June.....	158	157	209	261		1430	⁶ 275	126	400
July.....		157	210	278	193	1430		126	401
Aug.....		157	210	278		1430		126	401
Sept.....		157	210	278		1430	⁶ 300	126	401
Oct.....		157	211	278	193	1430		126	408
Nov.....		157	212	278		1430		126	408
Dec.....	156	157	211	278		1430	⁶ 300	126	408
1929.....									
Jan.....		157	222	306	193	1430		126	408
Feb.....		157	223	306		1430		126	408
Mar.....		157	223	306		1430	⁶ 300	126	408
Apr.....		157	223	306	196	1430		126	408
May.....		157	223	306		1430		126	408
June.....	154	157	224	306		1476	⁶ 300	126	408
July.....		157	224	317	196	1476		126	408
Aug.....		157	224	317		1476		126	408
Sept.....		157	224	317		1476		126	408
Oct.....		157	225	322	196	1476		127	410
Nov.....		157						127	
Dec.....	152								

¹ December.² July.³ January-June.⁴ October, 1913; January, April, and June, 1914.⁵ April-June.⁶ Quarter ending with month.

TABLE 5.—INDEX NUMBERS OF COST OF RENT IN THE UNITED STATES AND IN FOREIGN COUNTRIES, 1913 TO DECEMBER, 1929—Continued

Country.....	Norway	Poland	Sweden	Switzer- land	United Kingdom	India	Australia	New Zealand
Number of localities..	30	Warsaw	49	27	20-30	Bombay	6	25
Computing agency --	Central Statistical Office	Central Statistical Office	Board of Social Welfare	Federal Labor Office	Ministry of Labor	Labor Office	Bureau of Census and Statistics	Census and Statistics Office
Base period.....	July, 1914	January, 1914	July, 1914	June, 1914	July, 1914	July, 1914	1911	July, 1914
1914.....	⁷ 100	100	² 100	² 100	² 100	² 100	108	² 100
1915.....								101
1916.....			¹ 108					101
1917.....			⁹ 112					102
1918.....	⁷ 111		² 112					105
1919.....	⁷ 123		² 120					108
1920.....	⁷ 147		² 130		² 118			114
1921.....	⁷ 161		² 155	138	² 145	² 165	141	126
1922.....	⁷ 171		² 163	146	² 153	² 165	149	136
1923.....	⁷ 173		² 163	150	² 148	² 165	155	148
1924.....	⁷ 176		² 178	155	² 147	² 165	162	160
December.....	176			158	² 147	172		
1925.....			² 186	162	² 147	² 172	165	169
December.....	179	41		163	148	172		
1926.....			² 188	166	² 150	² 172	168	180
December.....	179	44		167	150	172		
1927.....				172			168	187
January.....		53	188	167	151	172		
February.....		53		167	151	172		185
March.....	181	53		167	151	172		
April.....		57	198	167	151	172		
May.....		57		174	151	172		187
June.....	181	57		174	151	172		
July.....		46	198	174	151	172		
August.....		46		174	151	172		189
September.....	181	46		174	151	172		
October.....		49	198	174	151	172		
November.....		49		174	151	172		189
December.....	181	49		174	151	172		
1928.....							174	
January.....		53	198	174	151	172		
February.....		53		174	151	172		188
March.....	179	53		174	151	172		
April.....		56	199	174	151	172		
May.....		56		177	151	172		189
June.....	179	56		177	151	172		
July.....		58	199	177	151	172		
August.....		58		177	151	172		190
September.....	179	58		177	151	172		
October.....		58	199	177	151	172		
November.....		58		177	150	172		190
December.....	179	58		177	150	172		
1929.....								
January.....		58	199	177	152	172		
February.....		58		177	152	172		190
March.....	175	58		177	152	172		
April.....		58	200	177	152	172		
May.....		58		181	153	172		191
June.....	175	58		181	153	172		
July.....		58	200	181	153	172		
August.....		58		181	153	172		192
September.....	175	58		181	153	172		
October.....		58	200	181	153	172		
November.....		58		181	152	172		
December.....					152			

¹ December.² July.⁷ June.⁹ September.

Comparison of Living Standards of Farm and City Families in Minnesota

THE University of Minnesota has been publishing a series of bulletins on the incomes and expenditures of Minnesota families. A recent bulletin compares data obtained for farm and city families for 1927-28 in the retail trade areas of two small cities, one of about 15,000 population located in the southern dairy section of the State, and the other of about 50,000 population, in the small grain and potato section of the northwestern part of the State.¹ In the smaller area the records of 150 farm families and 151 town families were studied. In the larger community information was secured for only 76 farm families and 100 town families, since it had been found that "results did not change materially after the first 100 urban families were studied or the first 75 farm families." To simplify analysis, and because the combined results were thought to be more typical of farm and city conditions in Minnesota generally than those in the separate communities, the data for the two sections were combined in the report and presented for farm and city without regard to community. The report points out, however, that the study is a comparison of rural-urban conditions in these two communities, and "is in no sense an attempt to picture average rural or average urban conditions for the State."

Owners, part owners, and tenants were represented in the farm group and all city occupational and social classes were included in the city group. Laboring or wage-earning families comprised 40.4 per cent of the city group, retired farmers and broken families 15.1 per cent, and the remainder, 44.5 per cent, "were receiving mainly salaries, business profits, or unearned incomes." The farm families averaged 3.8 adult units and the city families 3.3 adult units.²

The report gives details of the cash receipts and expenditures of both groups. However, cash receipts can not be used as a basis on which to compare the total incomes of farm and city families since, in addition to cash income, farms furnish large amounts of food, some fuel, house rent, and certain natural advantages which, the report states, "it is almost impossible to reduce to a money basis because quantities are lacking, prices must be chosen almost arbitrarily, and their production and utilization have little relation to the factors and forces affecting cash receipts."

Also, no real comparison can be made between the total expenditures of farm and city families, because many of the items of living expense that must be paid for in the city are obtained on the farm at little or no cash outlay. For example, as pointed out in the report, "the single-family dwelling, with its peace and quietness, its large lawn and comparative safety for children, is something that may be purchased in towns only with large sums of money," and also "the greater quantities of food consumed by farm families, as many studies in America and Europe have shown, are difficult to evaluate." The author believes that "the easiest and best all-round comparison seems

¹ University of Minnesota. Agricultural Experiment Station. Bulletin 255: Incomes and expenditures of Minnesota farm and city families, 1927-28, by Carle C. Zimmerman. St. Paul, 1929.

² The number of adult units was obtained by reducing all persons to the equivalent number of adults according to food needs, an adult employed male between 20 and 60 years of age being considered as one unit. All others were added according to their average food needs as determined by age and sex.

to be in the amounts available or spent for savings and nonphysiological living purposes (other than food, clothing, and household purposes)." The accompanying table, reproduced from the report, shows the expenditures per family and per adult unit for investment and nonphysiological purposes, by social class.

EXPENDITURES PER FAMILY AND PER ADULT UNIT FOR INVESTMENT AND FOR NONPHYSIOLOGICAL PURPOSES, BY SOCIAL CLASS

Social class	Number of families	Per cent of total	Adult units	Average expenditures for other than necessities for the present	
				Per family	Per adult unit
Farmers.....	226	100.0	3.8	\$1,616	\$425
Retired farmers.....	11	4.4	3.0	2,229	743
Widows and spinsters.....	27	10.7	3.4	927	243
Laborers.....	60	23.8	3.5	613	175
Artisans.....	42	16.6	3.2	788	246
Clerical and managerial.....	41	16.3	3.1	2,137	690
Professional.....	25	9.9	3.4	4,033	1,186
Business.....	46	18.3	3.3	5,881	1,782
Total and average.....	252	100.0	3.3	2,295	695

The figures in the table indicate that the farmers were considerably better off than the laborers, artisans, and broken families, which together constitute 51.1 per cent of the city group, although the farmers were apparently not so well off as the three upper city classes. However, the high averages for these upper classes were the result of the large incomes of a few families. In the managerial group the incomes ranged from \$1,060 to \$18,600; in the professional group, from \$1,420 to \$26,500, and in the business group, from \$1,055 to \$26,550. The data led to the conclusion that "in spite of the apparent high average incomes of the city population, farmers are really better off as to both incomes and standards of living, than the lower two-thirds of the urban population," which was further substantiated by a comparison of the property accumulated by the rural and urban groups. However, it should be noted that, according to the report, the farm communities studied were more prosperous than the average of the State.

Comparisons of the amounts spent for individual items showed that the average expenditure per year by the farm families for clothing was \$60 per adult unit, as compared with \$99 by the city families. The difference in the averages is attributed in the report to the greater clothing expenditures by the three upper city classes "who make their living, so to speak, in expensive clothing. The type of clothing that the farmer and the laborer wear only a few hours each week is worn all the time by the upper classes. These differences in themselves do not show differences in standards of living as much as in methods of living." The amounts spent by the farm families on automobiles averaged \$248 per family and by the city families \$279, but the laborers' families averaged only \$71 and the artisans' families \$91. Health expenditures of the farm families averaged \$108, and of the laborers in the city, \$101; of the artisans, \$87; of the managerial class, \$102; of the professional class, \$112;

and of the business class, \$167. The low average for the professional class, it is said, was probably due to the great amount of professional courtesy among the physicians included in this group. For miscellaneous purposes, the farm families had an average expenditure of \$202, as compared with \$173 for city laborers, \$168 for the artisans, \$347 for the managerial class, \$1,015 for the professional class, and \$672 for the business class.

Cost of Living in Peru

IN THE Statistical Abstract of Peru for the year 1928, the Peruvian Bureau of Statistics has published a table showing the average retail prices of 15 food articles in that country for the years 1913 to 1928, from which the following table has been prepared. The price equivalents in United States currency have been computed for 1928.

AVERAGE RETAIL PRICES OF SPECIFIED ARTICLES OF FOOD IN PERU, BY YEARS

[Average exchange rate of sol in 1928=39.7 cents; 1 kilogram=2.2 pounds; 1 liter=1.06 quarts]

Article	Unit	1913 (Sols)	1920 (Sols)	1924 (Sols)	1928	
					Sols	United States currency
Beef.....	Kilogram	0.70	1.35	1.20	1.16	\$0.46
Mutton.....	do.	.60	1.10	1.03	1.24	.49
Pork.....	do.	.85	2.00	2.25	1.87	.74
Sweet oil.....	do.	.65	1.28	.67	.98	.39
Rice.....	do.	.20	.51	.38	.38	.15
Sugar.....	do.	.13	.24	.24	.28	.11
Vermicelli.....	do.	.30	.61	.48	.52	.21
Kidney beans.....	do.	.20	.34	.29	.20	.08
Flour.....	do.	.17	.38	.31	.40	.16
Milk, fresh.....	Liter	.30	.55	.50	.47	.19
Milk, condensed.....	Can	.25	.42	.33	.40	.16
Corn.....	Kilogram	.09	.21	.19	.16	.06
Lard.....	do.	.61	1.64	1.16	1.37	.54
Bread.....	do.	.12	.21	.17	.19	.08
Potatoes.....	do.	.286	.625	.453	.348	.14

IMMIGRATION AND EMIGRATION

Statistics of Immigration for November, 1929

By J. J. KUNNA, CHIEF STATISTICIAN UNITED STATES BUREAU OF IMMIGRATION

THERE was a decrease in both the inward and outward alien passenger movement in November, 1929, as compared with the average for the preceding four months. In that month, 36,320 aliens were admitted and 16,398 departed, while the monthly average for the period from July 1 to October 31, 1929, was 46,738 aliens admitted and 27,129 departed. The same month also saw a decrease in debarments as well as in deportations. In November last 591 aliens were debarred from entering the United States and 1,286 were deported under warrant proceedings after landing, against a monthly average for the first four months of the current fiscal year of 757 debarred and 1,369 deported.

Of the total admitted in November, 27,692 aliens, or over three-fourths, came in at the seaports and 8,628 entered the country at stations along the northern and the southern land boundaries. New York continues to be the principal port of landing for arrivals from overseas, 23,447, or 84.7 per cent, of the seaport admissions during this month being recorded as coming that way, while only 4,245 aliens entered at the other seaports.

Of the 591 aliens debarred this month, 432 were turned back at the land border stations and 159 at the seaports. Of the latter only 81 were rejected at New York and all but 3 of these arrived without proper immigration visas. At the other seaports, about 2 out of every 100 applicants in November failed to gain admission to this country, but many of these debarred were seamen or stowaways found on board tramp steamers and combination freight-passenger vessels who sought permanent entry to the United States without first securing visas abroad as required by the immigration act of 1924.

The figures for November, 1929, show a decrease in immigration from Europe as well as from Canada and Mexico compared with the previous month, 12,833 immigrant aliens from Europe, 6,089 from Canada, and 1,124 from Mexico having been admitted during November, as against 16,136, 7,416, and 1,333 immigrants from these respective sources in October, 1929. Emigration to all countries also dropped from 4,907 to 3,053.

Just a little over one-fourth of the 223,271 aliens of all classes admitted to the United States from July to November, 1929, were immigrants charged to the quota, 59,984 being recorded as of this class. The other principal classes entering the country during the same five months include 57,769 aliens who came in under the immigration act of 1924 as returning residents, 39,421 as natives of non-quota countries, principally Canada and Mexico, 31,480 as temporary visitors for business or pleasure, and 11,649 passing through the country on their way elsewhere. Another large group admitted

during the same period comprised 16,534 aliens who were admitted under the act as the wives or unmarried children of United States citizens. Of this class, 14,549, or 88 per cent, were born in countries of southern and eastern Europe, over three-fourths (12,122) of whom gave Italy, Poland, Greece, or Czechoslovakia, as their country of birth. About two-thirds of the immigrants now coming from these four countries are the wives or unmarried children of American citizens. Of the remaining aliens of the same class admitted from July to November last, 1,139, or 6.9 per cent, are natives of western and northwestern European countries, and 846, or 5.1 per cent, are natives of Syria, Turkey in Asia, or the other countries.

INWARD AND OUTWARD PASSENGER MOVEMENT FROM JULY 1 TO NOVEMBER 30, 1929

Period	Inward					Aliens de- barred from enter- ing ¹	Outward					Aliens de- ported after land- ing ²
	Aliens admitted			United States citizens arrived	Total		Aliens admitted			United States citizens de- ported	Total	
	Immi- grant	Non- immi- grant	Total				Emi- grant	Non- emi- grant	Total			
July, 1929	20,068	15,749	35,817	37,636	73,453	847	5,086	23,084	28,170	56,339	84,509	1,261
August, 1929	22,778	19,007	41,785	70,783	112,568	802	5,571	23,723	29,294	70,551	99,845	1,411
September, 1929	28,020	28,517	56,537	85,946	142,483	719	5,156	21,398	26,548	49,429	75,977	1,205
October, 1929	26,740	26,072	52,812	47,757	100,569	659	4,907	19,597	24,504	39,767	64,271	1,600
November, 1929	21,522	14,798	36,320	25,129	61,449	591	3,053	13,345	16,398	20,413	36,811	1,286
Total	119,128	104,143	223,271	267,251	490,522	3,618	23,767	101,147	124,914	236,499	361,413	6,763

¹ These aliens are not included among arrivals, as they were not permitted to enter the United States.

² These aliens are included among aliens departed, they having entered the United States, legally or illegally, and later being deported.

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Official State Regulations, Orders, Advisory Pamphlets, and Labor Laws relating to Safety ¹

Alabama

BOARD OF COAL MINE INSPECTORS.

Mining law of State of Alabama. Birmingham, 1928. 46 pp.

Arizona

INSPECTOR OF MINES.

Mining Code. Phoenix. 10 pp.

Arkansas

BUREAU OF LABOR STATISTICS. *Boiler Inspection Department.*

Boiler inspection law and rules. Little Rock, 1927. 19 pp.

— Mining laws—An annotated digest of labor laws of State in force at close of legislative session of 1923, Chapter 18, pp. 76-102.

California

INDUSTRIAL ACCIDENT COMMISSION.

Air pressure—Tank safety orders. (Effective 1928.) Sacramento. 72 pp.

— Boiler safety orders. (Effective 1925.) 32 pp.

— Clothes cleaning and spotting and sponging establishments, Act of. (Effective 1929.) 14 pp.

— Construction, general safety orders. (Effective 1926.) 72 pp.

— Dry cleaning and dyeing establishments, safeguarding. (Effective 1927.) 16 pp.

— Electrical safety orders. (Effective 1925.) 213 pp.

— Elevator safety orders. (Effective 1926.) 87 pp.

— Engine safety orders. (Effective 1925.) 8 pp.

— Explosives, general construction safety orders relating to storage and use of. (Effective 1918.) 20 pp.

— General safety orders (gears, belts, pulleys, clutches, belt shifters, shafting, set screws, sprockets, flywheels, grinding wheels, ladders, stairways, platforms, swinging doors, windows). (Effective 1916.) 10 pp.

— Gold dredges, safety rules for. (Effective 1918.) 23 pp.

— Labor laws of State of California, 1927. 350 pp.

Safety of workmen, pp. 161-184.

Sanitation—Factories and workshops, pp. 132-151.

— Laundry, Safety orders. (Effective 1916.) 7 pp.

— Lighting, General safety orders. (Effective 1919.) 63 pp.

— Logging and sawmill safety orders. (Effective 1917.) 37 pp.

— Mine safety orders. (Effective 1920.) 125 pp.

— Mine fire control safety orders. (Effective 1923.) 16 pp.

— Petroleum, General safety orders. (Effective 1924.) 23 pp.

— Quarry safety rules. (Effective 1919.) 57 pp.

¹ Prepared by Library of National Bureau of Casualty & Surety Underwriters, New York.

INDUSTRIAL ACCIDENT COMMISSION—Continued.

- Shipbuilding safety orders. (Effective 1921.) 61 pp.
- Spray coating safety orders. November, 1927. 19 pp.
- Steam shovel and locomotive crane safety orders. (Effective 1920.) 10 pp.
- Trench construction safety orders. (Effective 1917.) 7 pp.
- Tunnel safety rules. (Effective 1922.) 139 pp.
- Window cleaning safety orders. (Effective 1917.) 7 pp.
- Woodworking safety orders. (Effective 1916.) 7 pp.

Advisory Pamphlets

- Elementary first aid instruction for employees in industry. (Effective 1925.) 16 pp.
- Hazards in dry cleaning industry. (Effective 1925.) 8 pp.
- Hazards ordinarily found in garages and automobile service shops. [n. d.] 15 pp.
- Organization of safety committees in industry. (Effective 1923.) 14 pp.

Colorado**BUREAU OF LABOR STATISTICS.**

Factory inspection law. (Effective 1929.) (*In* Compiled labor laws of State of Colorado, 1929, Denver, pp. 24, 35.)

Includes guarding of belts and pulleys, vats, pans, trimmers, cut-offs, saws, planers, cogs, gearing, belting, shafting, coupling, set screws, line rollers, conveyors, manglers in laundries, and all other machinery practicable to guard. Embodies, also, rules regulating dust, hoistways, hatchways, elevators, wellholes, stairways in factories, mills, etc.

COAL MINE INSPECTOR.

Coal mining laws, 1913, with amendments to 1929. Denver. 98 pp.

Connecticut**BUREAU OF LABOR STATISTICS.**

Labor laws and regulations relating to the Department of Factory Inspection. Hartford, 1929. 36 pp.

Includes: Boiler inspection, dust removal, fire escapes, elevator construction and examination, factory sanitation, guarding of machinery, laundries, toilet accommodations, washrooms, etc.

Georgia**DEPARTMENT OF COMMERCE AND LABOR.**

Seats and fire escapes, sanitary conditions of hotels and inns. Atlanta. 3 pp.; mimeographed.

Illinois**DEPARTMENT OF LABOR. *Division of Factory Inspection.***

Laws of the State of Illinois enforced by the Department of Labor. (Effective 1915.) Springfield. 86 pp.

Health, safety and comfort law, pp. 42-64. Occupational disease law, pp. 65-77.

DEPARTMENT OF MINES AND MINERALS.

General mining laws. (Effective July 1, 1927.) Springfield. 119 pp.

Indiana**DEPARTMENT OF MINES AND MINING.**

Mining laws in force, 1929. Indianapolis. 84 pp.

INDUSTRIAL BOARD.

Laws relating to and under the supervision of the Industrial Board of Indiana. Indianapolis. 30 pp.

Guarding of elevators, stairs, belts and pulleys, vats, pans, saws, planers, cogs, gearing, belting, shafting, set screws and other machinery, pp. 3-5. Fire escape law, pp. 12-22.

Iowa

BUREAU OF LABOR.

Elevator law, passenger and freight. (Effective 1925.) Des Moines. 2 pp.

— Fire escape law. (1924.) 11 pp.

— Health and safety appliance laws. (1924.) 6 pp.

BUREAU OF MINES.

Mining laws: Revised laws relating to inspection and regulation of mines and mining. Des Moines, 1929. 40 pp.

Kansas

DEPARTMENT OF LABOR AND INDUSTRY.

Kansas labor laws and laws especially affecting the employment of labor (annotated). Topeka, 1918. 258 pp.

CHAPTER 14.—Department of Labor and Industry, covering: Heating, lighting, ventilation, sanitary arrangement, belting, shafting, gearing, elevators, drums, saws, cogs, or machinery, p. 174.

CHAPTER 24.—Manufacturing establishments, covering: Elevators, hoisting, shafts, wellholes, handrails, stairs, doors, fire escapes, belt shifters, pp. 102-105.

CHAPTER 26.—Mines and quarries, pp. 106-138.

Kentucky

AUDITOR'S OFFICE.

Standards of safety adopted and approved by Department of Fire Prevention, and rates. (Effective 1929.) Frankfort. 109 pp.

Contains sections: IV.—Dry cleaning and dry dyeing plants; V.—Flammable liquids and products thereof; VI.—Garages and automobile repair shops; VII.—Explosives; VIII.—Sale and storage of matches; IX.—Miscellaneous hazards in occupancies; X.—Installation of boilers, cupolas furnaces and other similar heating and power devices; XIII.—Electrical devices and electrical wiring; XIV.—Installation of radio equipment; XV.—Handling, storage and sale of flammable motion-picture film and pyroxylin plastic; XVI.—Storage of photographic and X-ray nitro-cellulose films; XVII.—Calcium carbide and acetylene; XVIII.—Installation and operation of compressed gas systems other than acetylene for lighting and heating; XIX.—Prevention of dust explosions; XX.—Installation of refrigerating systems; XXI.—Storage and handling of combustible fibers; XXIII.—Construction and protection of airports.

DEPARTMENT OF LABOR.

Laws and rules of interest and pertaining to children, labor, safety, industry. (Effective March, 1929.) Louisville. 95 pp. (*Its Bulletin No. 32.*)

Use of suction or exhaust system required upon polishing and grinding machinery, pp. 41-43; Industrial hygiene recommendations, pp. 45-50.

Louisiana

DEPARTMENT OF LABOR.

Labor laws of the State of Louisiana, 1929. New Orleans, 1929. 155 pp.

Health and safety laws covering: Health of employees in manufactories, use of linotype machines, safeguarding machinery, pp. 76-90; State building code, pp. 90-94.

Maine

DEPARTMENT OF LABOR AND INDUSTRY.

Labor laws of Maine. Revision of 1927. Augusta. 62 pp.

SECTION 12. Powers of commissioner or agent to enter manufacturing establishment . . . duty when conditions are found unsanitary, or injurious to health, pp. 5-7.

Maryland

BUREAU OF LABOR AND STATISTICS.

Labor laws of Maryland. Baltimore, 1927. 326 pp.

Comprises: Mining laws and rules, pp. 28-63; Workshops and factories—inspection, sanitation, scaffolding, stone grinding mills, pp. 174-191; Laws relating to special occupations and employment—plumbers, boiler rules, seamen, pp. 227-244; Steam boiler inspection, pp. 250-255.

BUREAU OF LABOR AND STATISTICS—Continued.

Bureau of Mines.

Mining laws, 1923. Baltimore. 102 pp.

— — — Amendments of 1929. Baltimore. 5 pp.; mimeographed.

*National Codes*²

- ABRASIVE WHEELS, Safety code for use, care and protection of. (U. S. Bureau of Labor Statistics Bulletin No. 463. Washington, 1927. 32 pp.)
- BUILDING EXITS code. Boston, National Fire Protection Association, 1929. (Second edition.) 110 pp.
- DUST EXPLOSIONS, Safety code for prevention of. (U. S. Bureau of Labor Statistics Bulletin No. 433. Washington, 1927. 40 pp.)
- ELECTRICAL SAFETY code. (U. S. Bureau of Standards, Handbook series No. 3. (4th edition.) Washington, 1927. 525 pp.)
- ELEVATORS AND ESCALATORS, Safety code for. New York, American Society of Mechanical Engineers, 1925. 59 pp.
- FOUNDRIES, Safety code for the protection of industrial workers in. (U. S. Bureau of Labor Statistics Bulletin No. 336. Washington, 1923. 12 pp.)
- GAS safety code. New York, American Gas Association, 1925. 19 pp.
- HEADS AND EYES of industrial workers, Safety code for the protection of. (U. S. Bureau of Standards, Handbook series No. 2. Washington, 1922. 66 pp.)
- LADDERS, Safety code for the construction, care and use of. (U. S. Bureau of Labor Statistics Bulletin No. 351. Washington, 1923. 15 pp.)
- LAUNDRY MACHINERY AND OPERATIONS, Safety code for. (U. S. Bureau of Labor Statistics Bulletin No. 375. Washington, 1924. 12 pp.)
- LIGHTING factories, mills and other work places, Code of. (U. S. Bureau of Labor Statistics Bulletin No. 331. Washington, 1923. 29 pp.)
- LOGGING AND SAWMILL MACHINERY, Safety code for. (U. S. Bureau of Standards, Handbook series No. 5. Washington, 1923. 140 pp.)
- PAPER AND PULP MILLS, Safety code for. (U. S. Bureau of Labor Statistics Bulletin No. 410. Washington, 1926. 37 pp.)
- POWER PRESSES AND FOOT AND HAND PRESSES, Safety code for. (U. S. Bureau of Labor Statistics Bulletin No. 430. Washington, 1926. 64 pp.)
- POWER TRANSMISSION APPARATUS, Mechanical safety code for. (U. S. Bureau of Labor Statistics Bulletin No. 364. Washington, 1924. 30 pp.)
- ROCK DUSTING COAL MINES, Recommended practice for. New York, American Institute of Mining and Metallurgical Engineers, 1925. 4 pp.
- PUBLIC MILLS AND CALENDERS, Safety code for. (U. S. Bureau of Labor Statistics Bulletin No. 447. Washington, 1927. 10 pp.)
- WOODWORKING PLANTS, Safety code for. (U. S. Bureau of Labor Statistics Bulletin No. 378. Washington, 1924. 18 pp.)

*Massachusetts*DEPARTMENT OF LABOR AND INDUSTRIES. *Division of Industrial Safety.*

- Anthrax prevention—Rules and regulations suggested for prevention of. Boston. 10 pp. (*Its Industrial Bulletin* No. 6.)
- — — Benzene derivatives and explosives, Rules and regulations suggested for safety in manufacture of. (*Its Industrial Bulletin* No. 11.) Boston, 1916. 10 pp.
- — — Building operations, Prevention of accidents in. Boston, 1926. 6 pp. (*Its Industrial Bulletin* No. 12.)
- — — Care of employees injured or taken ill in industrial establishments, Requirements for. Boston, 1928. 4 pp. (*Its Industrial Bulletin* No. 14.)
- — — Compressed air work, Rules and regulations. Boston, 1928. 8 pp. (*Its Industrial Bulletin* No. 7.)

² Adopted by the State Accident Fund under a general clause which was construed as giving it that right. An enabling act has since been passed and it is not yet known whether these codes will be enforced or new regulations adopted.

- DEPARTMENT OF LABOR AND INDUSTRIES. *Division of Industrial Safety*—Con.
 Eyes, Protection of, and prevention of accidents. Boston, 1924. 8 pp.
(Its Industrial Bulletin No. 5.)
- Foundries—Safe and sanitary working conditions in. Boston, 1928.
 8 pp. *(Its Industrial Bulletin No. 10.)*
- Health and safety of employees, Law relating to. Boston, 1922.
 18 pp. *(Its Labor Bulletin No. 4.)*
- Deals with: Lighting, ventilation, and sanitation of factories, guards for gears, shuttles, traversing machinery in cotton mills; communication with engine room; locking doors during working hours; hoistway openings; storage of explosives, etc.
- Lighting code for factories, workshops, manufacturing, mechanical, and mercantile establishments. Boston, 1923. 6 pp. *(Its Industrial Bulletin No. 18.)*
- Machinery standards, Safety rules and regulations. Boston. 7 pp.
(Its Industrial Bulletin No. 9.)
- Painting business, Revised rules and regulations. Boston, 1926.
 7 pp. *(Its Industrial Bulletin No. 13.)*
- Power-press tools, Rules and regulations for safeguarding. Boston, 1928. 4 pp. *(Its Industrial Bulletin No. 17.)*
- Safety rules and regulations and machinery standards. Boston, 1928.
(Its Industrial Bulletin No. 9.)
- Deals with: Main power control, power transmission, belt shifters, pulleys, clutches, shafting, set screws, couplings and collars, gears and sprocket wheels, balance and fly wheels, keys and keyseats, ladders, passageways, permanent platforms, railings, stairs.
- Toilets in industrial establishments, Rules and regulations. Boston, 1923. 6 pp.
- Woodworking machinery safeguarding, Rules and regulations. Boston, 1924. 4 pp. *(Its Industrial Bulletin No. 16.)*
- Work of Division of Industrial Safety, Law relating to. General Laws, Chapter 149, and amendments, including Acts of 1926. Boston, 1927. 31 pp. *(Its Labor Law Bulletin No. 9.)*
- New edition in hands of printer.
- Above contains provisions as to: Health and safety, including lighting, ventilation, sanitation, guards for gears and shuttles, traversing carriages of certain machines, communication with engine room, openings in hoistways, storage of explosives, etc. Sections 106-142, pp. 21-27.

Michigan

DEPARTMENT OF LABOR AND INDUSTRY.

- Board of Boiler Rules, Regulations and rules for safe and proper use, construction and inspection of steam boilers. Lansing, 1923. 15 pp.
- Coal mines—Act No. 177 of Public Acts of 1913 regulating operation of coal mines. Lansing. 13 pp.
- Fans and blowers—Act No. 183, 55th Legislative Session of 1929. Bill No. 176. Lansing. 1 p.
- Fire escapes, Uniform specifications and regulations for. Lansing. 10 pp.
- Labor laws of Michigan, 1927. Lansing. 76 pp. 1929 amendments. Lansing. 2 pp.; mimeographed.
- Contains: Act providing for guarding of hoisting shafts, wellholes, elevator openings, fire escapes, etc., pp. 22, 23; for safeguarding belts, gearing, and dangerous machinery, pp. 25, 26; exhaust fans, p. 26; inspection of factories, pp. 28-30; safeguards for foundries, exhaust fans, blowers, suction pipes, dust removers, steam boilers, pp. 35-40.
- Laundries, machinery and operations, adopted by the State Department of Labor and Industry. Lansing. 8 pp. *(Its Safety code series No. 2.)*
- Spray coating of manufactured or fabricated articles—paints, varnishes, lacquers, enamels, stains and similar surface coatings by means of compressed air; and the handling and storage of inflammable materials. Rules and standards of State Fire Marshal, 1915, with 1927 amendments. Lansing. 16 pp.

Minnesota

INDUSTRIAL COMMISSION.

- Carbon monoxide gas in garages—Rules or standards adopted by Industrial Commission of Minnesota. St. Paul, 1928. 1 p.
- Electric plating, tinning, and metal polishing plants—Safety code applying to operations of. St. Paul, 1923. 1 p.; mimeographed.
- Industrial safety standards. St. Paul, 1924. 96 pp.
- Applies to: Railings, toe boards, and guards; floors, walls, hoistway openings, stairs; runways and platforms; traveling cranes; elevators; boilers; electrical equipment; explosive hazard; engines; power transmission equipment; machine hazard; points of operation; welfare and health; safety organization; mines and miners.
- Installation of exhaust systems for buffing or emery wheels. 1 p.; mimeographed.
- Labor laws, 1929. St. Paul. 262 pp.
- Laws requiring safeguarding of machinery and dangerous conditions of employment, and protection in case of fire. St. Paul, 1921. 40 pp.
- Power-driven machinery—Standard requirements. St. Paul, 1923. 2 pp.; mimeographed.
- Refrigerating plants—safety regulations. St. Paul, 1923. 2 pp.; mimeographed.

Mississippi

BUREAU OF INDUSTRIAL HYGIENE, AND FACTORY INSPECTION.

State factory inspection law, passed by Legislature of Mississippi, session of 1914, amended 1926. Jackson, 1927. 2 pp.

Comprises: Factory inspection laws, safety and sanitary laws and regulations.

Missouri

BUREAU OF MINES.

General mining laws, 1927. Jefferson City.

DEPARTMENT OF LABOR AND INDUSTRIAL INSPECTION.

Labor, industrial and statistical laws of Missouri. Jefferson City, 1927. 34 pp.

Industrial inspection, p. 12; general provisions for health and safety; safety guards, belts, hatch ways, ventilation, sanitation, scaffolding, etc., pp. 12-21; boiler rules, p. 25.

Montana

INSURANCE DEPARTMENT.

Safety provisions of workmen's compensation act, operation and inspection of quartz mines, coal mines, stationary boilers, examining and licensing engineers. (*In Workmen's compensation laws.*) Helena.

Nebraska

DEPARTMENT OF LABOR.

Labor laws. Lincoln, 1919. 60 pp.

Health and safety regulations, pp. 31-37.

Construction work, pp. 38-46.

Nevada

OFFICE OF LABOR COMMISSIONER.

Compiled labor laws of State of Nevada. Carson City, 1925. 212 pp.

Provides rules for boiler inspection, mill and smelter regulations, public utility standards, and safety in general.

— General safety orders. (Effective July 1, 1922.) Carson City. 15 pp.

SECRETARY OF STATE.

State and Federal mining laws. Carson City, 1927. 115 pp.

New Hampshire

BUREAU OF LABOR.

An act to provide for safety and health of employees in factories and work-shops, and amended by Chapter 66, Laws of 1919 and Chapter 130, Laws of 1921. (*In* Compiled labor laws of State. Concord, 1923, pp. 43-48.)

— Safety standards. Concord. 13 pp.

Loose leaf folder: Sheet No. 1—Stairways. No. 2—Railings. No. 3—Belts and pulleys. No. 4—Elevators. No. 5—First-aid cabinets. No. 6—Abrasive wheels. No. 7—Fire escapes. No. 8—Miscellaneous. No. 9—Toilet facilities. No. 10—Drinking water. No. 11—Safety organization. No. 12—Woodworking machinery. No. 13—Woodworking standards.

— Safety and health of employees. Chapter 177, Public Laws of New Hampshire, 1926. Concord. 11 pp.

New Jersey

DEPARTMENT OF LABOR AND INDUSTRY.

Abrasive wheels, Safety standards relating to use and care of. Trenton, 1922. 27 pp. Addenda effective May 25, 1926. 2 pp.; mimeographed.

— Aniline—Instructions for inspection of plants where aniline is produced or handled. Trenton. 6 pp.

— Boiler inspection. Trenton, 1920. 8 pp.

— Electrical safety rules relating to grounding of utilization equipment. Trenton. 6 pp.; mimeographed.

— Elevators located in factory buildings, Standard specifications for. Trenton. 4 pp.

— Explosives, Laws and safety standards for manufacture and storage of. Trenton, 1918. 44 pp.

— Felt hat and fur-cutting industries, Sanitary standards for. Trenton, 1916. 94 pp.

— Fire alarm signal system for factories, mills and other places. Trenton, 1924. 23 pp.

— Fire towers, fire escapes, fireproofing of doors and windows in connection with fire escape construction. Trenton, 1926. 16 pp.

— Labor laws administered by State of New Jersey. Trenton, 1921. 239 pp.

CHAPTER XIII.—Fire protection; XIV—Factory elevators; XV—Interlocks on passenger elevators; XVI—Scaffolding; XVII—Machinery safeguarding; XIX—Hygiene and sanitary provisions for factories, workshop, mercantile establishments; XX—Foundries; XXI—Lead poisoning law; XXII—Compressed air law; Mines and quarries; XXVI—Explosives law.

— Laundry machinery and operations, Safety code for. Trenton, 1927. 11 pp.

— Laws and standards of Bureau of Mines. Trenton, 1919. (Issued by Bureau of Mines.)

— Lead corrodors and lead oxidizers, paint grinders, dry color manufacture, Safety standards for. Trenton.

— Lead poisoning, and other occupational diseases, Act to prevent poisoning, providing penalties for violation of its provisions. Chapter 162, Laws of 1914. Trenton. 10 pp.

— Lighting factories, mills and other places, Code of. Trenton, 1924. 38 pp.

— Lithopone, Sanitary industrial standards for manufacture of. Trenton. 1 p.; mimeographed.

— Mechanical power transmission apparatus, Code for safeguarding of. Trenton, 1924. 29 pp.

— Nitro and amido compounds, Safety standards for manufacture of. Trenton, 1919. 18 pp.

— Passenger elevator interlock specifications. Chapter 260, Laws of 1916. Trenton. 9 pp.

— Power presses and foot and hand presses, Safety code for. Trenton, 1924. 48 pp.

— Rubber mills and calenders, Safety code affecting point of operation hazards. (Tentative.) Trenton. 3 pp.; mimeographed.

DEPARTMENT OF LABOR AND INDUSTRY—Continued.

- Sanitary and engineering industrial standards. Trenton, 1919. 52 pp.
- Standards for promotion of safety education. Trenton, n. d. 13 pp.
- Use of lacquers, shellacs, enamels and japans, Tentative safety standards proposed by Department of Labor. Trenton, 1919. 16 pp.; mimeographed.
- Woodworking plants, Safety code for. Trenton, 1927. 18 pp.

New Mexico

INSPECTOR OF COAL MINES.

- Mining laws. Albuquerque, 1919. 61 pp.

New York

DEPARTMENT OF LABOR.

- Automatic sprinkler systems, Rule relating to. Albany, 1918. 14 pp. (*Its Bulletin No. 20.*)
- Boilers, power, locomotive and miniature steam—Rules as amended, relating to construction, installation, inspection and maintenance of. Albany, 1926. 181 pp. (*Its Industrial Code Bulletin No. 14.*)
- Building—Erection, repair or demolition of, Rules relating to. Albany. 22 pp. (*Its Bulletin No. 23.*)
- Compressed air work (tunnels and caissons) and tunnel construction (general), Industrial code rules relating to. Albany. 35 pp. (*Its Bulletins Nos. 22 and 25.*)
- Dry dyeing and dry cleaning plants, Rules relating to. Albany. 29 pp. (*Its Bulletin No. 29.*)
- Dust, gases and fumes, Rules relating to removal of. Albany, 1915. 12 pp. (*Its Bulletin No. 12.*)
- Elevators, dumbwaiters, escalators, hoists and hoistways in factories and mercantile establishments, Industrial code rules relating to construction, guarding, equipment, maintenance and operation of. Albany, 1923. 60 pp. (*Its Bulletin No. 8.*)
- Foundries and employment of women in core rooms, Rules relating to equipment, maintenance and sanitation of. Albany. 12 pp. (*Its Bulletin No. 10.*)
- Labor law and pertinent provisions of State departments ... with amendments, additions and annotations to August 1, 1928. Albany. 168 pp.
Includes preventive regulations for: Factories, mercantile establishments, mines and quarries, compressed air, explosives.
- Laundries, Rules relating to construction, equipment, maintenance and operations of. Albany. 19 pp. (*Its Bulletin No. 27.*)
- Lighting of factories and mercantile establishments, Rules relating to. Albany. 10 pp. (*Its Bulletin No. 18.*)
- Machinery, vats, pans and elevated runways, dangerous, Rules for guarding of. Albany. 33 pp. (*Its Bulletin No. 19.*)
- Mercantile establishments, Rules relating to construction, equipment, arrangement and maintenance of buildings hereafter erected to be occupied as mercantile establishments. Albany, 1924. 18 pp. (*Its Bulletin No. 26.*)
- Milling industry and malthouse elevators, Rules relating to. Albany, 1915. 6 pp. (*Its Bulletin No. 11.*)
- Mines and quarries, Rules relating to. Albany, 1918. 46 pp. (*Its Bulletin No. 17.*)
- Required exits and enclosure of interior stairways serving as required means of exit in factory buildings five (5) stories or less in height, erected prior to October 1, 1923. (Not applicable to the city of New York.) Albany, 1914. 8 pp. (*Its Bulletin No. 2.*)
- Sanitation of factories and mercantile establishments, and trough water-closets, Rules relating to and list of approved sanitary material, July 1, 1926. Albany. 32 pp. (*Its Bulletins Nos. 9 and 16.*)

DEPARTMENT OF LABOR—Continued.

- Sewing machines, machinery, apparatus, equipment, furniture and fixtures in needle trades, Rules relating to arrangement and guarding of. Albany, 1924. 11 pp. (*Its Bulletin No. 28.*)
- Smoking in protected portions of factories and special classes of occupancies, Rule relating to. Albany, 1918. 8 pp. (*Its Bulletin No. 15.*)
- Window cleaning, Rule relating to. Albany, 1918. 2 pp. (*Its Bulletin No. 21.*)

Industrial Hygiene Series

DEPARTMENT OF LABOR.

- For workers in lead and antimony. Albany. 7 pp.
- For workers in arsenic. Albany. 3 pp.
- For workers in wood alcohol and derivatives. Albany. 2 pp.
- For workers in mercury. Albany. 3 pp.
- For workers in chromic acid and its salts. Albany. 3 pp.
- For workers in benzol. Albany. 3 pp.
- For printers—How to avoid lead poisoning. Albany. 4 pp.
- Anthrax—How to avoid it.

North Carolina

DEPARTMENT OF LABOR AND PRINTING.

- Labor laws of North Carolina, annotated. Raleigh, 1919. 46 pp.
- Medical chests prescribed, p. 5; mines and mining laws, pp. 39-44.

North Dakota

COAL MINE INSPECTION DEPARTMENT.

- Mining code, approved 1919, amended 1923. Bismarck, 1924. 47 pp.

Ohio

DEPARTMENT OF INDUSTRIAL RELATIONS.

- Accident prevention and first aid suggestions. Columbus, 1926. 61 pp.
- Blowers and exhausts, Specific requirements for. Columbus, 1924. 7 pp.
- Building and construction work, Specific requirements for. Columbus, 1926. 29 pp.
- Revised edition is being prepared by special code committee appointed by commissioner of department.
- Building code—Special requirements for workshops, factories, mercantile and office buildings. Columbus, 1927. 20 pp.
- Elevators, Specific requirements. Columbus, 1924. 18 pp.
- Explosives Law: An act relating to manufacture, keeping, storage, transportation and sale of explosives. Columbus, 1919. 15 pp.
- Factory and building inspection laws. Columbus, 1924. 64 pp.
- Foundries and core rooms, Specific requirements in, and regulations for employment of women in. Columbus, 1924. 10 pp.
- General safety standards for workshops and factories. Columbus, 1924. 10 pp.
- Heating and ventilating systems, Requirements of. Columbus, 1919. 12 pp.
- Laundry and dry cleaning code, Committee report and specific requirements relating to. Columbus.
- Metal working machinery, Specific requirements relating to. Columbus, 1928. 5 pp.
- Mining laws of Ohio, 1927. Columbus. 190 pp.
- Passenger and freight elevators, Specific requirements relating to. Columbus. 17 pp.

DEPARTMENT OF INDUSTRIAL RELATIONS—Continued.

- Polishing and grinding machines, Specific requirements. Columbus, 1928. 7 pp.
- Potteries, Specific requirements for. Columbus, 1924. 6 pp.
- Pressure piping and mechanical refrigeration systems, Tentative code of safety rules and regulations covering installation of. Columbus, 1926. 42 pp.
- Rubber industry, Recommendations for accident prevention in. Columbus. 6 pp; mimeographed.
- Steel mills, Specific requirements for. Columbus, 1924. 11 pp.
- Traveling cranes, General safety precautions for. Columbus, 1926. 4 pp.
- Woodworking machinery, Specific requirements. Columbus, 1928. 5 pp.

Oklahoma

DEPARTMENT OF LABOR.

- Boiler construction code, 1921. Oklahoma City, 1927. 172 pp.
- Freight and passenger elevators, dumbwaiters and escalators, Code of safety standards for construction, equipment, operation, and maintenance of. Oklahoma City, 1927. 56 pp. (*Its Bulletin No. 5A.*)
- Labor laws, 1927. Oklahoma City. 92 pp.
- Law governing the inspection and regulation of factories. Oklahoma City, 1928. 5 pp. (*Its Bulletin No. 7A.*)
- Gives digest of law governing the inspection and regulation of factories giving safe practices, details for guarding shafting, coupling, gearing, belts and pulleys, engine guards, engine stops grinding wheels, belt shifters, etc., showing cuts giving details for the construction of safety appliances for different kinds of transmission machinery.
- Lighting of factories and mercantile establishments, Rules relating to. Oklahoma City, 1922. 14 pp. (*Its Bulletin No. 3.*)
- Petroleum safety standards. 1928 edition. Oklahoma City. 78 pp. (*Its Bulletin No. 11A.*)
- Standard specifications. Oklahoma City. 21 sheets.
- Contains: Standard specifications for handrails, guards for belts and pulleys or engine flywheels, etc.; for handrails and toe boards for runways, platforms, elevations and floor openings, for stairway and ladder construction; for enclosing set or train of gears, for keys, dead ends of shafting, set screws and collars; for safeguarding emery wheels; for power transmission control; for safeguarding machines in gins and cotton-oil mills; machines in laundries and cleaning works; woodworking machines and for tunnel construction for passageways.

Oregon

BUREAU OF LABOR.

- Lighting in factories, mills, offices, and other work places, Code governing. Salem, 1920. 80 pp.
- Mechanical power transmission, Safety code. Salem, 1928. 8 pp.
- Unfired pressure vessels, Rules for construction of. Salem. 6 pp.
- Effective February 1, 1926; amended February 1, 1928.

STATE INDUSTRIAL ACCIDENT COMMISSION.

- Boiler safety orders. Salem. 4 pp.
- Part I effective July 1, 1924. Part II effective January 1, 1922.
- Circular power-driven woodsaws, Safety orders concerning operation of. Salem, 1923. 3 pp.
- Factory inspection law, 1911, as amended by 1927 Legislature. Salem. 4 pp.

Pennsylvania

DEPARTMENT OF LABOR AND INDUSTRY.

- Abrasive polishing wheels, Regulations for. Harrisburg, 1928. 33 pp.
- Bakeshops operative on and after April 25, 1916. (Safety standards of the Industrial Board, Vol. I, No. 9.) Harrisburg, 1916. 14 pp.
- Boilers, Safety standards of. (Safety standards of the Industrial Board, Vol. I, No. 12.) (Revised, 1919.) 170 pp. Supplement No. 1, 1921. 13 pp.

DEPARTMENT OF LABOR AND INDUSTRY—Continued.

- Brewing and bottling. (Safety standards of the Industrial Board, Vol. I, No. 26.) Harrisburg, 1917. 6 pp.
- Canneries, Safety standards of. (Safety standards of the Industrial Board, Vol. I, No. 11.) Harrisburg. 8 pp.
- Cereal mills, malthouses, and grain elevators, Safety standards of. (Safety standards of the Industrial Board, Vol. I, No. 15.) Harrisburg, 1916. 8 pp.
- Compressed air apparatus, Safety standards of. (Safety standards of the Industrial Board, Vol. I, No. 7.) Harrisburg, 1915. 5 pp.
- Construction and repairs. Harrisburg, 1929.
- Cranes and hoists, Regulations for. Harrisburg, 1926. 29 pp.
- Dry color industry, Safety standards of. (Safety standards of the Industrial Board, Vol. I, No. 24.) Harrisburg, 1917. 13 pp.
- Electric code. (Safety standards of the Industrial Board, Vol. I, No. 21.) Harrisburg, 1917. 183 pp.
- Elevators, escalators, dumbwaiters and hoists, Safety standards for. Harrisburg, 1924. 115 pp.
- Explosives in pits, quarries and mines (other than coal mines), Regulations for handling, storing and use of. Harrisburg, 1928.
- Explosives—Plants manufacturing or using explosives, Safety standards of. (Safety standards of the Industrial Board, Vol. I, No. 19.) Harrisburg, 1917.
- Forging and stamping, Safety standards. (Safety standards of the Industrial Board, Vol. I, No. 5.) Harrisburg, 1915. 5 pp.
- Foundries, Safety standards. (Safety standards of the Industrial Board, Vol. I, No. 13.) Harrisburg, 1915. 13 pp.
- Head and eye protection. (Safety standards of the Industrial Board, Vol. I, No. 4.) Harrisburg. 25 pp.
- Labor laws, 1924. Harrisburg. 148 pp.
Pertains to: Safety of employees, general factory laws and elevator safety equipment; health of employees, exhaust systems, work in compressed air, foundries, rolling mills, boiling mills, heating mills, finishing mills, etc., fire protection.
- Ladders, Safety standards. (Safety standards of the Industrial Board, Vol. I, No. 14.) Harrisburg, 1916. 10 pp.
- Laundries, Safety standards. Harrisburg, n. d. 10 pp.
- Lead corroding and lead oxidizing, Safety standards. (Safety standards of the Industrial Board, Vol. I, No. 22.) Harrisburg, 1917. 15 pp.
- Lighting, industrial, Regulations. Harrisburg, 1926. 23 pp.
- Logging, sawmill, woodworking, veneer, and cooperage operations. Harrisburg, 1927.
- Machine tools, Regulations for. Harrisburg, 1928. 8 pp.
- Mechanical power transmission, Regulations for. Harrisburg, 1929. 34 pp.
- Mines other than coal mines. Harrisburg, 1926.
- Motion picture machine operation, Safety standards of. (Safety standards of the Industrial Board, Vol. II, No. 27.) Harrisburg, 1918. 9 pp.
- Nitro and amido compounds: Suggested safe practices. (Safety standards of the Industrial Board, Vol. I, No. 25.) Harrisburg, 1917. 18 pp.
- Paint grinding, Safety standards. (Safety standards of the Industrial Board, Vol. I, No. 23.) Harrisburg, 1917. 12 pp.
- Pits and quarries. Harrisburg, 1926.
- Plant railways, Safety standards. (Safety standards of the Industrial Board, Vol. II, No. 29.) Harrisburg, 1919. 8 pp.
- Polishing and grinding, Safety standards. (Safety standards of the Industrial Board, Vol. I, No. 6.) Harrisburg, 1915. 9 pp.
- Power, foot and hand cold metal presses, Regulations for. Harrisburg, 1926. 14 pp.
- Printing and allied industries, Safety standards. (Safety standards of the Industrial Board, Vol. II, No. 31.) Harrisburg, 1919. 16 pp.
- Railings, toe boards, open-sided floors, platforms, and runways, Regulations for. Harrisburg, 1926. 23 pp.

DEPARTMENT OF LABOR AND INDUSTRY—Continued.

- Safe practices recommendations.** Harrisburg, 1927. 43 pp.
- **Scaffolding, Safety standards.** (Safety standards of the Industrial Board, Vol. I, No. 28.) Harrisburg, 1918. 38 pp.
- **Spray coating, Regulations for.** Harrisburg, 1928. 24 pp.
- **Stationary steam engines, Safety standards.** (Safety standards of the Industrial Board, Vol. I, No. 3.) Harrisburg, 1915. 6 pp.
- **Textile industries, Regulations, Rules 266 to 276, inclusive.** Harrisburg, 1925. 22 pp.
- **Window cleaning.** Harrisburg, 1926.
- **Woodworking machinery, Safety standards.** (Safety standards of the Industrial Board, Vol. I, No. 8.) Harrisburg, 1915. 5 pp.

Rhode Island

OFFICE OF FACTORY INSPECTORS.

- Factory inspection law, amended 1926; with 1928 amendments.** Providence. 29+1 pp.

South Carolina

DEPARTMENT OF AGRICULTURE, COMMERCE, AND INDUSTRIES.
Labor laws. Columbia.

Tennessee

DEPARTMENT OF LABOR.

- Handbook of industrial safety standards.** Nashville. 79 pp.
- Applies to:** Stairways; elevated runways and platforms; traveling cranes; elevators; boilers; electrical equipment; explosive liquids and vapors; acids and caustics; engines; power-transmission equipment; belts and pulleys; textile machines; food and beverage; paper and printing; wood-working; abrasive wheels, retaining hood, etc.; ammonia compressors and refrigerating, oiling of machinery; shafting, etc.; wire-drawing machines; presses; eye protectors; safety organization.
- **Metal machinery, Specific requirements covering the operation of.** Nashville. 6 pp.
- **Polishing and grinding machines, Specific requirements.** Nashville. 7 pp.
- **Safety rules and regulations and machinery standards.** Nashville. 11 pp.
- Includes:** Main power control, power transmission, belt shifters, pulleys, clutches, shafting, set screws, couplings and collars, gears and sprocket wheels, balance and fly wheels, keys, ladders, passageways, platforms, railings, stairs, etc.
- **Woodworking machinery, Specific requirements covering operations of.** Nashville. 6 pp.
- **Division of Mines.**
- Mining in Tennessee, Laws governing and regulating.** With 1929 amendments. Nashville. 35+1 pp.

Texas

BUREAU OF LABOR STATISTICS.

- Laws of Texas relating to labor.** Austin, 1927. 127 pp.
- Health, comfort, and safety law: Temperature and humidity, odors and dust; cleaning and wet floors,** pp. 26-29; **mining law,** pp. 73-80.

Utah

INDUSTRIAL COMMISSION.

- Boiler code.** Salt Lake City, 1927. 18 pp.
- **Coal mine safety orders.** Salt Lake City, 1920. 51 pp.
- **General safety orders.** Salt Lake City, 1917. 18 pp.
- **Laundry safety orders.** Salt Lake City, 1917. 11 pp.
- **Metal mining operation, Underground.** Salt Lake City, 1919. 45 pp.
- **Metal miners' safety rules.** Salt Lake City, 1926. 23 pp.

Vermont

OFFICE OF COMMISSIONER OF INDUSTRIES.

General laws of State of Vermont relating to labor. General Assembly of State of Vermont, 1921, Montpelier. 38 pp.

Chapter 243: Inspection of factories, pp. 27, 28.

Virginia

DEPARTMENT OF LABOR AND INDUSTRY.

Labor laws of Commonwealth of Virginia. Richmond, 1929. 73 pp.

Contains orders applicable to: Grinding, polishing and buffing wheels, safety appliances, vats, elevators, saws, planers, cogs, gearing, belting, shafting, set screws, shapers, corner machines, foundries; railroad repair work; mines and mining.

Washington

DEPARTMENT OF LABOR AND INDUSTRIES.

Compilation of labor, industrial insurance, medical aid, safety and other laws administered by Department of Labor and Industries, 1927. Olympia.

Contains: Rules for electrical construction. 16 pp. Compilation of safety law. 18 pp. Public utilities—Safety inspection laws. 23 pp.

— Safety standards effective January 1, 1924. Olympia. 96 pp.

Applies to: Acids and chemicals, explosives, compressed-air lines, laundries, mines, and quarries, woodworking, belts, pulleys, clutches, gears, exhaust systems, flywheels, grinding wheels, hoisting, hoistways, ladders, scaffolds, lighting, educational standards, etc.

— *Division of Safety.*

Coal mining laws as amended 1919 and 1927. Olympia. 126 pp.

West Virginia

BUREAU OF LABOR.

Bureau of Labor, factory inspection and child labor laws of West Virginia. Charleston. 24 pp.

Guarding of machinery, hoistways, hatchways, elevators, electrical apparatus, etc.

— Labor laws of West Virginia, 1924. Charleston. 176 pp.

Contains provisions for: Protection of all power-driven machinery, including saws, planers, wood shapers, jointers, sandpaper machines, iron mangles, emery wheels, ovens, furnaces, forges and rollers of metal; all drum, cogs, gearing, belting, shafting, flywheels and shuttles; laundry machinery; vats or pans, etc., pp. 8-11; hatchways, elevators and electrical appliances, pp. 11, 12; mining law, pp. 27-75.

DEPARTMENT OF MINES.

Mining law as amended by Legislature of 1929. Charleston. 82 pp.

Acts of 1929, Chapter 83, section 59. Covers: Guarding of power-driven machinery, projecting sets, screws or moving parts, laundry machinery, mill gearing, vats or pans, receptacles containing molten metal or hot or corrosive fluids in any factory, mercantile establishment, mill or workshop.

Wisconsin

INDUSTRIAL COMMISSION.

Boiler code. Revised January 1, 1928. Madison. 166 pp.

— Buildings, existing—General orders. Reprinted, with amendments, 1928. Madison. 77 pp.

— Construction, safety in—General orders. Revised, 1922. Madison. 32 pp.

— Elevator code. Revised, 1926. Madison. 84 pp.

— Heating and ventilation code. Revised May 14, 1925. Madison. 54 pp.

— Mines, General orders on. (Effective May 1, 1922.) Madison. 47 pp.

— Refrigerating plant code. (Effective June 26, 1918.) Madison. 4 pp.

— Safety, General orders on. Provisions of Chapter 101, Laws of 1923. Madison. 20 pp.

— Sanitation, General orders on. Including ventilation, toilet rooms, and general sanitation. Madison. 54 pp.

— Spray coating, General orders on. Revised October, 1925. Madison. 15 pp.

Wyoming

BUREAU OF LABOR AND STATISTICS.

Exempts from Chapter 113 of 1917 Session Laws of Wyoming, creating the Office of Commissioner of Labor and Statistics. Cheyenne.

Covers: Safety devices for openings of hoistways, elevators, wellholes, and stairways in all establishments where labor is employed, and the equipment of all machinery with proper shifters for throwing pulleys on or off, and other such safeguards as may be deemed necessary for the proper safeguard of life and limb.

— Coal-mine Inspection Department. Mining laws, 1925. Rock Springs.
Supply exhausted.

PUBLICATIONS RELATING TO LABOR

Official—United States

KANSAS.—Commission of Labor and Industry. Department of Workmen's Compensation. *Annual report for fiscal year ending June 30, 1929.* Topeka, 1929. 141 pp.

Reviewed in this issue.

PENNSYLVANIA.—Department of Labor and Industry. *Regulations for spray coating.* Harrisburg, 1929. 35 pp.; diagrams.

TENNESSEE.—Department of Labor. *Sixth annual report.* Nashville, 1929. 167 pp.

Wage statistics from this report are published in this issue.

VERMONT.—Office of Commissioner of Industries. *Biennial report, for the two years ending June 30, 1928.* Rutland, 1928. 27 pp.

Summary data on workmen's compensation, taken from this report, are given in this issue.

UNITED STATES.—Department of Agriculture. *Circular No. 80: Organization and management problems of cooperative oil associations in Minnesota,* by Rudolph K. Froker and H. Bruce Price. Washington, 1929. 46 pp.; charts.

— *Circular No. 87: Problems in cooperation and experiences of farmers in marketing potatoes,* by T. B. Manny. Washington, 1929. 24 pp.

— *Department bulletin No. 1106: Legal phases of cooperative associations,* by L. S. Hulbert. Washington, 1929. 125 pp.

A revision of a former bulletin, bringing up to date information relating to laws and court decisions regarding agricultural cooperative organizations.

— *Index to Farmers' Bulletins Nos. 1001-1500,* compiled by Mabel G. Hunt. Washington, 1929. 371 pp.

— Department of Commerce. *Seventeenth annual report of the Secretary of Commerce, 1929.* Washington, 1929. lii, 370 pp.

— Bureau of Foreign and Domestic Commerce. *Commerce yearbook, 1929.* Vol. I.—United States. Vol. II.—Foreign countries. Washington, 1929. [Various paging.] Maps, charts.

— *Statistical abstract of the United States, 1929.* Washington, 1929. 868 pp.

This statistical abstract represents "a digest of data collected by all statistical agencies of the National Government, as well as those of a considerable number of private agencies and one or two States." The many subjects covered include immigration and emigration, vocational education, prices and cost of living, wages and hours of labor, and employment.

— Bureau of Mines. *Nineteenth annual report, for the fiscal year ended June 30, 1929.* Washington, 1929. 63 pp.

— Bureau of the Census. *Census monograph X: Earnings of factory workers, 1899 to 1927; an analysis of pay-roll statistics,* by Paul F. Brissenden. Washington, 1929. xii, 424 pp.; map, charts.

UNITED STATES.—Department of Labor. Bureau of Labor Statistics. *Bulletin No. 503: Wages and hours of labor in the men's clothing industry, 1911 to 1928.* Washington, 1929. 73 pp.

——— *Bulletin No. 504: Wages and hours of labor in the hosiery and underwear industries, 1907 to 1928.* Washington, 1929. 82 pp.

Summaries of Bulletins Nos. 503 and 504, respectively, were published in the Labor Review for January, 1929 (pp. 128-134), and for April, 1929 (pp. 143-153).

——— *Bulletin No. 505: Directory of homes for the aged in the United States.* Washington, 1929. 75 pp.

——— *Bulletin No. 509: Textile safety code.* Washington, 1929. 11 pp.

——— Employment Service. *Industrial, agricultural, and general employment prospects for 1930.* Washington, 1930. 23 pp.

——— Women's Bureau. *Bulletin No. 75: What the wage-earning woman contributes to family support, by Agnes L. Peterson.* Washington, 1929. 21 pp.

A reprint from the Annals of the American Academy of Political and Social Science, May, 1929. A compilation based upon various studies made by the Women's Bureau and other agencies.

——— Federal Board for Vocational Education. *Thirteenth annual report, 1929.* Washington, 1929. 104 pp.; charts.

Reviewed in this issue.

——— Treasury Department. Public Health Service. *Annual report for the fiscal year 1929.* Washington, 1929. 332 pp.; charts, illus.

The work of the division of industrial hygiene and sanitation during the year ending June 30, 1929, included the continuation of various studies which had been started in earlier years, such as the possible health and industrial hazards connected with the distribution and use of tetraethyl lead gasoline; the health hazards of dusty trades, covering during the past year granite dust, cotton dust, and coal dust; studies in ventilation and illumination; industrial poisons, including lead and benzol; and studies of industrial morbidity and mortality. Other studies included one on the health of workers and occupational environment in clock and watch factories where radium dial painting is carried on, and various studies made in cooperation with other Government agencies. Summaries of most of the studies which have been published have appeared in different issues of the Labor Review.

Official—Foreign Countries

AUSTRALIA (NEW SOUTH WALES).—Department of Labor and Industry. *Report on the working of the factories and shops act, 1912, during the year 1928.* Sydney, 1929. 40 pp.

——— (QUEENSLAND).—Insurance Office. *Thirteenth annual report, for the year ended June 30, 1929.* Brisbane, 1929. 33 pp.

Covers the year's work in workers' compensation, miners' phthisis insurance, life, fire, marine, and miscellaneous accident insurance.

——— (TASMANIA).—Industrial Department. *Fourteenth annual report, for 1928-29, on factories, wage boards, shops, etc.* Hobart, 1929. 25 pp.

Gives tables showing, by age and sex, the number of employees registered in the factories in different industries, and others giving the minimum rates of pay and the hours worked per week in trades coming under a wages board determination.

AUSTRALIA.—(VICTORIA).—[Court of Industrial Appeals?] *Summary of wages and conditions fixed by wages boards or by Court of Industrial Appeals.* Melbourne, 1929. 183 pp.

— Department of Labor. *Report of the chief inspector of factories and shops, for the year ended December 31, 1928.* Melbourne, 1929. 49 pp.

Tables are included showing average weekly wages in various industries and occupations, by age and sex, accident statistics, strikes, hours of work, etc.

AUSTRIA (VIENNA).—Kammer für Arbeiter und Angestellte. *Wirtschaftsstatistisches Jahrbuch, 1928.* Vienna, 1929. 532 pp.

Contains statistical information in regard to economic conditions in Austria and in the city of Vienna during 1928, including wages, hours, and other labor conditions.

BELGIUM.—Ministère de l'Intérieur et de l'Hygiène. *Annuaire statistique de la Belgique et du Congo Belge, 1927-1928.* Brussels, 1929. [Various paging.]

This Belgian statistical yearbook contains data relative to unemployment, vocational education, industrial accidents, strikes and lockouts, and the number of workers, output, and wages in the coal mines of the country.

CANADA.—Department of Labor. *Labor legislation in Canada as existing December 31, 1928.* Ottawa, 1929. 733 pp.

FRANCE.—Ministère du Travail, de l'Hygiène, de l'Assistance et de la Prévoyance Sociales. *Annuaire statistique, 1928.* Paris, 1929. [Various paging.]

This French statistical yearbook contains data relative to wages and hours of labor, collective agreements, technical and vocational education, industrial accidents, and various forms of insurance. In most cases the statistics refer to 1927 or earlier years.

— — *Recueil de documents sur les accidents du travail, No. 57: Dix-septième rapport sur l'application de la loi du 9 avril 1898, années 1925 et 1926.* Paris, 1929. 55 pp.

This report, for the years 1925 and 1926, covers the application of the French law on industrial accidents with especial reference to the situation of the registered insurance funds and the operation of the guaranty funds.

GERMANY.—Reichsarbeitsministerium. *Arbeit und Gesundheit, Schriftenreihe zum Reichsarbeitsblatt, Heft 9: Staubgefährdung und Staubschädigungen der Metalle Schleifer.* Berlin, 1928. 205 pp.

Report on dust hazards of metal polishing.

GREAT BRITAIN.—Board of Trade. *Statistical abstract for the several British oversea dominions and protectorates for each of the years 1913 and 1922 to 1927.* London, 1929. 271 pp. (Cmd. 3434.)

— Ministry of Health. *Unemployed persons in receipt of domiciliary poor-law relief in England and Wales during the week ending June 15, 1929.* London, 1929. 23 pp. (Cmd. 3433.)

— Ministry of Labor. *Standard time rates of wages and hours of labor in Great Britain and Northern Ireland at August 31, 1929.* London, 1929. 231 pp.

The wage rates given as "standard" include the minimum rates, legally enforceable, fixed under the trade board and agricultural wages acts; rates decided upon either by a joint industrial council for the industry, or by collective agreements between employers' associations and trade-union organizations, or by an award of a third party to whom a dispute has been referred for arbitration; and rates which, though not embodied in a formal agreement, are generally recognized by employers' associations as those which their members shall pay, or by trade-unions as the minima which their members may accept.

The tables are so arranged as to show for each industry the recognized rates of wages and hours of work for the principal occupations of workers of each sex, separate details being given for all the towns or districts for which information is available, or for a wide selection of such towns and districts. As regards juvenile workers, details as to the rates of wages agreed upon or recognized by employers' associations and trade-unions in a large number of industries are brought together in one table, showing the rates for workers of each year of age from 14 upward.

GREAT BRITAIN.—Ministry of Labor. Committee on Procedure and Evidence for the Determination of Claims for Unemployment Insurance Benefit. *Report: Minutes of evidence.* London, 1929. 301 pp.

Shortly after the Labor Party came into power last spring a committee was appointed to consider and report upon the whole procedure of allowing or disallowing claims to benefit under the unemployment insurance act. The point most severely criticized in the procedure up to that time was the method—or rather methods, for the courts of referees varied widely in this respect—of determining whether or not an applicant was genuinely seeking work and unable to obtain it, and this point naturally received special attention in the hearings held by the committee. The present volume contains the evidence presented by Government officials, members of courts of referees empowered to pass on claims, and representatives of labor unions and of employers' organizations.

—Permanent Consultative Committee on Official Statistics. *Guide to current official statistics of the United Kingdom. Vol. 7 (1928). Being a systematic survey of the statistics appearing in all official publications issued in 1928.* London, 1929. 312 pp.

—Registry of Friendly Societies. *Report for the year 1928. Part 3: Industrial and provident societies; Section II, Directory and summary tables.* London, 1929. 143 pp.

INTERNATIONAL LABOR CONFERENCE. *Draft conventions and recommendations adopted by the Conference at its twelfth session, May 30–June 21, 1929.* London, 1929. 32 pp.

INTERNATIONAL LABOR OFFICE.—*Seasonal unemployment in the building industry in certain European countries, by L. Hersch.* Geneva, 1929. 74 pp.; charts. (Reprinted from *International Labor Review*, January, February, March, 1929.)

—*Studies and Reports, series O (migration), No. 3: Migration laws and treaties: Vol. III.—International treaties and conventions.* Geneva, 1929. 383 pp.

IRISH FREE STATE.—Department of Industry and Commerce. *Census of population, 1926. Vol. IV: Housing.* Dublin, 1929. 248 pp.

Of the total population of 2,971,992 persons, 781,000 were living in overcrowded conditions—that is, with more than two persons to a single room. According to this definition, overcrowding existed among 75.2 per cent of the 140,000 living in 1-room dwellings, among 59.3 per cent of the 440,000 living in 2-room dwellings, 36.9 per cent of the 793,000 in 3-room dwellings, and 17.2 per cent of the 623,000 in 4-room dwellings. This showed less overcrowding than existed in Scotland in 1921, but more than was found in Northern Ireland, England, or Wales.

—Registrar of Friendly Societies. *Report for the year ending December 31, 1928.* Dublin, 1929. 32 pp.

An interesting feature of the report is the recent growth shown in land and housing societies, a movement which has been stimulated by Government subventions under the various housing acts. Attention is called to the fact that in 1925 only four such societies were on the register, "and that the value of the land

and buildings held by the two societies from which returns were received amounted to only £54,000. By the end of 1927, 16 societies were on the register, and the value of the land and buildings held by those of them who furnished returns had increased to £112,957. During 1928, 13 societies were registered for the purpose of building houses for their members."

NETHERLANDS (THE HAGUE).—Statistisch Bureau. *Jaarboek 1926, 1927 en 1928. The Hague, 1929. 133 pp.*

Contains statistical information for the municipality of The Hague in 1926, 1927, and 1928, including data on labor conditions.

PERU.—Department of Treasury and Commerce. Bureau of Statistics. *Statistical abstract of Peru, 1928. Lima, 1929. 224 pp.; charts.*

The volume includes data on wholesale prices, cost of living, production, wages, and industrial accidents. Some of the figures on cost of living and on industrial accidents are given in this issue of the Labor Review.

SWEDEN (STOCKHOLM).—Statistiska Kontor. *Statistisk årsbok för Stockholms Stad, 1929. Stockholm, 1929. 286 pp.*

Contains statistical information for the city of Stockholm for 1929, including data on labor conditions.

SWITZERLAND.—Conseil Fédéral. *Message du Conseil fédéral à l'Assemblée fédérale relatif à un projet de loi sur l'assurance-vieillesse et l'assurance-survivant du 29 août 1929. Berne, 1929. 284 pp.*

This message of the Swiss Federal Council to the Federal Assembly contains the text of the Government bill on old-age and survivors' insurance and a detailed discussion of the provisions of the proposed law.

Unofficial

BOMBAY PRESIDENCY WOMEN'S COUNCIL. *Handbook of women's work, 1928-1929. Bombay, 1929. 87 pp.*

A directory, with brief descriptions, of the various women's organizations and institutions carrying on social, educational, and medical work, mainly for women and for children, throughout the Presidency.

CHAMBER OF LABOR FOR CROATIA AND SLAVONIA. *Index, Vol. 1, No. 1, Zagreb, Yugoslavia, March, 1929. 80 pp.; charts.*

The first issue of a quarterly journal which the Chamber of Labor for Croatia and Slavonia plans to publish in March, June, September, and December of each year, separate editions being issued in the Croatian, English, French, and German languages. The publication will present index numbers of wholesale and retail prices, cost of living, and "other index numbers likely to picture periodically the economic and social conditions in Yugoslavia." In addition to index numbers of prices and cost of living, this first number contains data on wages, unemployment, production, and external trade.

COMMITTEE ON THE COST OF MEDICAL CARE. *Abstract of publication No. 2: The extent of illness and of physical and mental defects prevailing in the United States; a compilation of existing material, by Alden B. Mills. Washington, 910 Seventeenth Street NW., 1929. 15 pp.*

Reviewed in this issue.

— *Abstract of publication No. 4: Hospital Service for patients of moderate means. A study of certain American hospitals, by Niles Carpenter. Washington, 910 Seventeenth Street NW., 1929. 15 pp.*

Reviewed in this issue.

COOK, ARTHUR E., AND HAGERTY, JOHN J. *Immigration laws of the United States, compiled and explained. Chicago, Callaghan & Co., 1929. 499 pp.; map.*

HEIMBURGER, KARL. *Die Theorie von der industriellen Reservearmee.* Halberstadt, H. Meyer, 1928. 160 pp.

Deals with theories of unemployment, especially with those of Karl Marx and his followers.

INTERNATIONALEN UNION DER ORGANISATIONEN DER ARBEITER UND ARBEITERINNEN DER LEBENS- UND GENUSSMITTELINDUSTRIE. Sekretariat. *Der Kampf gegen die Nachtarbeit im Bäckergewerbe.* Zurich [1929?]. 160 pp.

A report by the International Union of Workers in the Food and Drink Trades, on the struggle against nightwork in bakeries and cake and pastry shops up to the end of 1928 by labor unions in food and drink trades.

KOPF, E. W. *How should accidents be classified?* [New York, Metropolitan Life Insurance Co.?], 1929. 22 pp. (Reprinted from Transactions of the Eighteenth Annual Safety Congress, National Safety Council, 1929.)

MINNESOTA, UNIVERSITY OF. Agricultural Experiment Station. *Bulletin 255: Incomes and expenditures of Minnesota farm and city families, 1927-28*, by Carle C. Zimmerman. St. Paul, 1929. 50 pp.; charts.

Reviewed in this issue.

NATIONAL INDUSTRIAL CONFERENCE BOARD (INC.). *The five-day week in manufacturing industries.* New York, 247 Park Avenue, 1929. 69 pp.

Reviewed in this issue.

OHARA INSTITUTE OF SOCIAL RESEARCH. *The labor year-book of Japan, 1929.* Osaka, Japan. (Cover page in English; Volume published in Japanese.)

Included in the volume are sections on the following subjects: Condition of the working class (Part I); Labor movement (Part II); Labor policies by employers and authorities—public and private (Part III); International labor problems (Part VI); and Labor laws (Appendix I).

PRINCETON UNIVERSITY. Industrial Relations Section. *Memorandum: Age limitations in industry—statements of fact and opinion.* Princeton, N. J., 1929. 34 pp. (Mimeographed.)

Takes up the extent and significance of the problem, the reasons for its existence, and suggested solutions, and contains a short bibliography.

RAGER, FRITZ. *Das Inlandarbeiterschutzgesetz vom 19. Dezember, 1925.* Vienna, "Arbeit und Wirtschaft," 1927. 142 pp.

Contains the law of December 19, 1915, for protection of national labor against the employment of foreign labor in the country, and includes an interpretation of the law by the author and a brief sketch of similar laws in other countries.

SHERMAN CORPORATION. *Report of a study of wage payment methods in industry, covering 893 industrial companies with 502,273 employees.* Boston, 31 Milk Street, 1929. 3 sheets. (Photostat copy.)

DU TOIT, A. B. *Miners' phthisis compensation and a few figures.* Address delivered to the Chemical, Metallurgical and Mining Society of South Africa, November 15, 1929. [Pretoria?] 1929. 8 pp.

The average annual expenditure for miners' phthisis compensation for the years 1912 to 1929 is given, as well as facts regarding the financial status of the mining companies, their contributions to the phthisis funds, and the amount spent for sanatorium treatment for persons suffering from miners' phthisis. A list is given of the countries in which compensation is payable for miners' phthisis.

TRADES AND LABOR CONGRESS OF CANADA. *Report of the proceedings of the forty-fifth annual convention, held at the city of St. John, N. B., August 26 to August 30 (inclusive), 1929.* Ottawa, 172 McLaren Street, 1929. 202 pp.

A report on this convention was published in the November, 1929, issue.

UNITED STATES DEPARTMENT OF LABOR

BUREAU OF LABOR STATISTICS

MONTHLY

LABOR REVIEW



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